

ANNUAL REPORT  
OF THE  
**Department of Lands and Mines**  
OF THE  
PROVINCE OF ALBERTA  
FOR THE  
**Fiscal Year Ended March 31st**  
**1938**

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PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

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1939



*To the Honourable J. C. Bowen,  
Lieutenant-Governor of the Province of Alberta.*

SIR:

I have the honour to submit the report of the Department of Lands and Mines for the fiscal year ended March 31st, 1938.

I have the honour to be, Sir,

Your obedient servant,

N. E. TANNER,

*Minister of Lands and Mines.*

Edmonton, March 7th, 1939.



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GOVERNMENT OF ALBERTA  
DEPARTMENT OF LANDS AND MINES

Resulting from the transfer on October 1st, 1930 of Alberta's natural resources from federal to provincial control, the Department of Lands and Mines was on this date brought into being by the Alberta Government. The general purpose of the new Department was to be one of supervision and management of the resources in question.

Ministers of the Department, responsible at different periods for this administration, appear as follows:

*Hon. R. G. Reid, appointed October 2nd, 1930,*  
*Hon. Hugh W. Allen, appointed July 10th, 1934,*  
*Hon. Charles C. Ross, appointed September 3rd, 1935,*  
*Hon. N. E. Tanner, appointed January 5th, 1937.*

CHIEF OFFICERS  
DEPARTMENT OF LANDS AND MINES  
March 31st, 1938

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Honourable N. E. Tanner.....*Minister of Lands and Mines*  
John Harvie .....*Deputy Minister of Lands and Mines*  
T. C. Rankine .....*Departmental Solicitor*  
J. W. Stafford.....*Director of Lands*  
J. W. Stafford .....*Superintendent of School Lands*  
J. W. Hamilton .....*Superintendent of Mining Lands*  
T. W. Dalkin .....*Superintendent of the Technical Division*  
C. W. Dingman .....*Director of Petroleum and Natural Gas*  
T. F. Blefgen .....*Director of Forestry*  
J. A. Hutchison .....*Assistant Director of Forestry*  
F. W. Neilson .....*Chief Timber Inspector*  
I. N. McKinnon .....*Accountant*  
A. A. Millar .....*Chief Inspector, The Coal-mines Regulation Act*  
M. Gossip .....*Agent, Calgary Land Agency*  
R. Cruickshank .....*Agent, Lethbridge Land Agency*  
J. J. E. Clarke.....*Agent, Peace River Land Agency*  
J. L. Irwin .....*Statistician*





# REPORT

OF THE

## Department of Lands and Mines,

1937-38

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*Honourable N. E. Tanner,  
Minister of Lands and Mines,  
Edmonton.*

SIR:

I have the honour to submit the eighth Annual Report of the Department of Lands and Mines for the fiscal year ended March 31st, 1938.

Notwithstanding that the Game and Fisheries divisions were transferred in the month of May, 1937 to the Department of Agriculture, the revenue of our Department continued to increase, resulting in a surplus of \$1,084,591.78 in comparison with the previous year's profit of \$996,719.59. We anticipate that our profit in the coming year will be substantially greater by reason of the expansion of operations in the drilling for oil on provincial lands.

Dealing with the oil industry, the increase in production is worthy of our attention. The total production of oil for the year was 3,680,099 barrels as compared with 1,447,661 barrels in the fiscal year 1936-37, an increase of 2,232,438 barrels. Of this production the greater portion came from the southern Turner Valley on the western flank of the structure.

The attitude of the Department towards the wastage of gas is so well known that we merely make passing reference to the deplorable situation that is now about to be overcome. As our Departmental Report for the year 1932-33 shows, The Turner Valley Gas Conservation Board was appointed in April, 1932 to continue the tests our Petroleum and Natural Gas Division had been conducting for some years, also to suggest the adoption of production methods to minimize the wastage of gas. The Board's recommendations will be found in our Annual Report for the year that ended March 31st, 1933.

The opposition of many operators to any change in their methods nullified the work of the Board; however, with the completion of the Turner Valley Royalties crude oil discovery well in June, 1936, the majority of the operators as well as the citizens of the province became conscious of the fact that speedy action was essential if the oil resources of Alberta were to be a leader in the investment field of Canada.

Having decided that the wastage of gas must be discontinued, the Government sought the assistance of the Department of Mines, United States of America, Washington, D.C., in selecting competent conservation engineers, and as a result W. F. Knode, of the firm of Parker, Foran, Knode and Boatright, of Corpus Christi, Texas, came to Edmonton and assisted with the drafting of legislation for the bringing into force of proper operating methods. The legislation made provision for a Board with power to conserve the oil and gas resources of Alberta, but some question was raised later as to the validity of the Act. To remove any doubt the Legislature was called into special session and

as a result of their deliberation a new Act—"An Act for the Conservation of the Oil and Gas Resources of the Province of Alberta"—was assented to November 22nd, 1938. A copy of the Act immediately follows this section of the Report.

The development of the mineral resources has been left to private enterprise, the Department taking from production a reasonable share of the gross revenue. In the opinion of many authorities this procedure is the more preferable way as such action tends to a more rapid type of development and gives to the province a fair revenue.

As to the settlement of lands in the province, we have refrained from granting homesteads in many areas where it was doubtful that the lands were capable of sustaining a settler. Consequently, the time is not far distant when a change may have to be made in the system that has been followed in placing settlers on land.

With the exception of the fiscal year 1935-36, the year under review shows the greatest number of land patents issued together with the largest area covered thereby since the transfer of the natural resources to this province. The number in question for this year totalled 2,266 covering an area of 382,382.437 acres as compared with the peak year of 1935-36 which totalled 2,965 with an area of 433,529.126 acres.

Included with the Technical Division's section of this Report is a chart showing the total area of acres patented in the province from October 1st, 1930, date of the natural resources transfer, to March 31st, 1938. During this seven and a half year period 12,641 land patents have been issued which cover an area of 1,924,694.314 acres.

Also included in this section of the Report it will be noted that reference is made to the fact that completion of the boundary between Alberta and Saskatchewan from the south shore of Lake Athabaska to the northern boundary of the province is being carried out.

It is necessary to refer to the Forestry section of this Report in connection with the devastating forest fires which occurred during the calendar year of 1937.

Total loss of timber, young growth and other property for the year came to \$1,088,465.95, the worst period since the transfer of the resources with the exception of the preceding year, 1936, when the loss totalled \$1,549,930.30. By a strange coincidence the fires in 1937 were mainly outside the forest reserves—chiefly in the northern part of the province—whereas in 1936 they were mainly inside the reserves along the general area of the Rocky Mountains.

The seriousness of the situation is shown in the Director's report by the revelation that from the season of 1931 to the conclusion of the 1937 season there have been 2,249 forest fires which burnt over an area in excess of 1,939,661 acres, of which 1,404,859 acres carried tree growth. This latter area supporting tree growth would measure, if in a solid block, approximately 50 miles in length by 22 miles in width. The loss of timber, young growth and other property over this period of years reveals the alarming total of \$4,074,377.36 as shown in an itemized statement of this Report.

It has been repeatedly stated that Alberta's forests represent indirectly her most important resource. With the loss of vast blocks of growing timber comes a shortage of water supply, not only to this province but to others lying to the east of us. Forest cover conserves and regulates more than anything else the stream-flow of rivers. With the loss of this flow, animal and fish life dies, a menace arises to sanitation in towns and cities, industrial life is handicapped and the final result is drought with intermittent floods.

Conservation of timber is of primary importance to the general life of this province and it will be imperative, if the present situation is to be changed, that not only must the personnel of the Forestry staff be considerably augmented but also that the present equipment be renewed and added to on a scale sufficiently generous to ensure that the dangerous situation which exists may be noticeably reduced.

#### DEPARTMENT'S REVENUE AND PRODUCTION, 1937-38.

Revenue for the year after deducting Game and Fisheries revenue from last year's figure shows an increase of \$101,967.68. Expenditures, after making allowance in last year's figures for the cost of operation of the Game and Fisheries Branches, shows a decrease of \$42,464.96. An itemized statement showing revenue increases and decreases is given on the first page of the Accounting Division's section of this Report.

Petroleum production was increased by 2,232,438 barrels and natural gas consumption by 10,484,771 Mcf. Coal produced during the calendar year, 1937, showed a decrease of 144,693 tons in comparison with 1936. Coke production increased by 728 tons and briquettes by 6,029 tons. Electric power used in the operation of coal-mines during the year was increased by 571,506 k.w.hrs.

Shale mined during the calendar year showed an increase of 2,556 tons with an increase of 983,410 bricks manufactured therefrom; cement production increased 23,572 barrels; and lime, 1,522 tons. Stone produced showed a decrease of 694 tons.

#### PROVINCIAL LANDS ADMINISTRATION

*Homestead Entries.*—First and second homestead entries and soldier grants during the year totalled 1,600 covering approximately 256,000 acres in comparison with 1,432 with an approximate acreage of 229,120 for the previous year.

Comparative statement follows showing totals of homestead entries and soldier grants from 1930-31 to 1937-38. Fuller details of this information appear in the Accounting Division's section of this Report and in similar sections of the departmental Annual Reports of preceding years.

#### HOMESTEAD ENTRIES GRANTED

Fiscal Year	Homesteads	Second Homesteads	Soldier Grants	Total	Homesteads Granted to Women
1930-31 .....	3,042	557	149	3,748	.....
1931-32 .....	3,876	522	30	4,428	1,521
1932-33 .....	3,112	358	29	3,499	976
1933-34 .....	2,984	696	26	3,706	1,011
1934-35 .....	2,425	325	30	2,780	835
1935-36 .....	1,329	186	13	1,528	455
1936-37 .....	1,296	129	7	1,432	479
1937-38 .....	1,479	111	10	1,600	585
Totals.....	19,543	2,884	294	22,721	5,862
	Increase	Decrease	Increase	Increase	Increase
This year in comparison with last .....	183	18	3	168	106

NOTE.—Homesteads for women were not available until 1932. The total number of women's homesteads as shown in the above statement is included in the first homestead total.

*Consolidation of Rentals and Tax Accounts on Grazing Lands.*—In connection with the consolidation of rental and tax accounts on grazing lands, the Director of Lands in his section of this Report comments on the conclusions, referred to under this heading in last year's Report, as they have been put into practice. Many expressions of appreciation have been received from lessees which showed that they considered such consolidation to be a great benefit, particularly from the viewpoint that from having only one account to pay they were greatly assisted in organizing their finances.

Other matters pertaining to provincial lands' administration are dealt with in this section of the Report.

#### SCHOOL LANDS ADMINISTRATION

Details of the administration of this Division are given in the section of this Report reserved for the Superintendent of School Lands.

#### MINING LANDS ADMINISTRATION

*Leases Dealt With.*—A statement in this section covers leases in connection with petroleum and natural gas from provincial lands, school lands and crown reserves, coal from provincial and school lands, quarrying, quartz mining, salt and gypsum, bituminous sands, dredging and miscellaneous.

Totals from October 1st, 1930, date of the natural resources transfer to the province, to March 31st, 1938, are given as follows:—Leases active at date of this transfer, 19,635; issued since that date, 6,804; divided, 138; cancelled, 19,367; renewed, 222; active as at March 31st, 1938, 6,988. Areas covered by same are given in a separate statement.

*Coal.*—A brief history of the disposal of coal rights, the property of the crown, is given in this section with varying dates and royalties in this connection.

*Revenue.*—Income revenue of this Division totalled for the year \$818,609.83, which in comparison with last year's total of \$757,247.46 shows an increase of \$61,362.37.

#### TECHNICAL DIVISION

*Issue of Notifications (Land Patents).*—As already stated the fiscal year, 1937-38 takes second place since the transfer of the resources regarding the number of land patents issued and area covered thereby, the total reaching 2,266 with an acreage of 382,382.437 as compared with the peak year of 1935-36 with 2,965 and an acreage of 433,529.126.

The following comparative statement gives totals by fiscal years from 1930-31 to 1937-38:

#### NOTIFICATIONS ISSUED

Fiscal Year	Number of Notifications	Area, Acres
1930-31 .....	23	3,019.71
1931-32 .....	784	111,424.478
1932-33 .....	1,260	178,887.233
1933-34 .....	1,106	165,224.553
1934-35 .....	2,006	324,611.398
1935-36 .....	2,965	433,529.126
1936-37 .....	2,231	325,615.379
1937-38 .....	2,266	382,382.437
Totals .....	12,641	1,924,694.314
Increase this year in comparison with last .....	35	56,767.058

*Lands transferred from the Dominion to the Province.*—A list of lands transferred from dominion to provincial control, resulting from representations made to Ottawa from this Department, is given. These lands represented areas near the Lake McGregor Reservoir, Peace River Landing Settlement and villa lots at Calgary.

*New Surveys.*—Details of new surveys are given under this heading together with information as already stated which deals with the completion of the Saskatchewan and Alberta boundary line to the northern boundary of the province.

*Soil Surveys.*—A soil survey of the Coutts Quarantine Reserve, formerly held by the Dominion Government, was made as this land was the subject of many enquiries.

*Plan Records showing Disposition of Townships in the Province.*—A new set of plan records showing disposition of townships in the province has been started. Such records will take some years to complete but on completion will prove of immense value to the Department.

*Plans of Areas which may be made available for settlement.*—A number of areas which may be made available for settlement was selected and plans with this possibility in view were prepared.

*Maps.*—Interest is steadily growing in the varied stock of maps, published by this Division, which is available to the public. Enquiries are received from a wide-spread area which includes foreign countries and a large number have been sent out in response to applications.

#### PETROLEUM AND NATURAL GAS

As stated in the opening remarks of the Director of Petroleum and Natural Gas in his section of this Report, the year 1937-38 saw Alberta passing from the status of importer to exporter of oil.

Activity continued on a large scale in southern Turner Valley and several new and large producers of crude oil made their appearance.

With the continuous increase of production, proration of wells was made effective by the marketing companies and on September 12th, 1937, the first order was issued limiting production to 65 per cent. of the capacity of wells.

Reasons given were that the capacity of pipe-lines and of refining and marketing facilities was completely exceeded by the available product. Further reductions were made. On November 1st the figure was reduced to 45 per cent and on November 15th to 35 per cent. On January 15th the Royalite Oil Company raised the figure to 42 per cent.

During the calendar year, 1937, Alberta raised the Dominion of Canada to fifth place in British Empire oil production, surpassing the totals recovered from British India and Sarawak. In the total of 2,982,572 barrels shown for Canada in this year, 2,796,908 barrels or 93.77 per cent were produced in Alberta.

Crown leases of the petroleum and natural gas rights active in Alberta at the end of 1937 numbered 6,466, covering an area of 971,312.48 acres, as compared with 3,838 leases with an acreage of 630,148.35 at the close of 1936.

Alberta's spectacular increase in petroleum production last year took her past the saturation point for provincial requirements and necessitated an outlet for the product beyond her borders. Prior to this, home production being insufficient for home needs, the balance had been imported from Montana.

Montana's crude oil prices, it has been stated, have been severely cut, resulting from the loss of Alberta as a permanent market. The prices of crude in Alberta have also been cut. The first, a reduction of 25 cents, came on September 1st, 1937, with gasoline reduced from 1 to 1½ cents per gallon according to grade. A second cut in Alberta crude became effective on January 6th, 1938, the reduction this time being 22 cents, with gasoline at this date reduced again by an additional 1½ cents per gallon. The two cuts since September, 1937, made a total reduction of 47 cents per barrel for crude oil and 3 cents per gallon for gasoline.

Drilling outside Turner Valley was active during the year and covered a large area of the province. A list of wells in these areas is given in the Director's section of this Report.

## DEPARTMENT OF LANDS AND MINES

## ALBERTA OIL PRODUCTION BY FISCAL YEARS

Period	Barrels	Fiscal year	Period	Barrels
1914 to close of fiscal year,			1934-35 .....	1,246,958
1928-29 .....	1,453,404		1935-36 .....	1,249,596
Fiscal year, 1929-30 .....	1,135,014		1936-37 .....	1,447,661
1930-31 .....	1,614,202		1937-38 .....	3,680,099
1931-32 .....	1,246,328			
1932-33 .....	871,082		Total .....	15,013,817
1933-34 .....	1,141,473			
Increase this year in comparison with last .....				2,232,438 barrels

## ALBERTA OIL PRODUCTION BY CALENDAR YEARS

Calendar Year	Barrels	Calendar Year	Barrels
1914 to 1924 .....	96,504	1932 .....	917,622
1925 .....	168,643	1933 .....	1,013,040
1926 .....	219,598	1934 .....	1,265,940
1927 .....	332,133	1935 .....	1,263,750
1928 .....	489,331	1936 .....	1,320,442
1929 .....	999,152	1937 .....	2,796,908
1930 .....	1,433,844		
1931 .....	1,455,195	Total .....	13,772,302

Increase this year in comparison with last .....

1,476,466 barrels

## NATURAL GAS CONSUMPTION

Fiscal Year	Mcf.
1929-30 .....	23,228,637
1930-31 .....	23,312,006
1931-32 .....	18,327,139
1932-33 .....	16,061,383
1933-34 .....	16,346,376
1934-35 .....	16,600,059
1935-36 .....	18,674,944
1936-37 .....	18,727,496
1937-38 .....	29,212,267
Total .....	180,490,307

Increase this year in comparison with last .....

10,484,771 Mcf.

## FOREST SERVICE

*Fire Season.*—The year 1937-38, with the exception of the previous year of 1936-37, was the most disastrous one for forest fires during the life of this Department.

The total loss passed the million dollar mark as compared with last year when the loss rose to over a million and a half. The coincidence has already been remarked that the loss this year was almost entirely outside the forest reserve as compared with last year when it was almost entirely within.

Midsummer and early fall brought extremely dry weather to the northern part of Alberta and it was in the Peace River, Lesser Slave and McMurray divisions that the greatest damage was experienced.

A detailed statement giving a summary of fire losses within and outside Alberta forest reserves from October 1st, 1930, date of the natural resources transfer to the province, to December 31st, 1937 appears on the next page.

## SUMMARY OF FIRE LOSSES WITHIN ALBERTA FOREST RESERVES

Period	Number of Fires	Cost of Suppression	Area (Acres)	Salvable Timber M.f.b.m.	Salvable Timber (Cords)	Unsalvable Timber M.f.b.m.	Unsalvable Timber (Cords)	Total Loss
October 1, 1930 to March 31, 1931	9	\$ 551.67	41.925	2,370.5	3,086	2.00	129.00	\$ 71.69
April 1, 1931 to December 31, 1931	31	17,624.12	52,218.05	8	15,863	6,295.73	111,599.00	154,651.47
Calendar Year 1932	32	3,491.04	2,555.75	8	15,863	3,845.00	1,005.60	8,790.73
Calendar Year 1933	39	18,409.92	29,275.88	26.75	1,201	19,188.25	108,414.00	95,796.93
Calendar Year 1934	47	31,118.51	21,963.00	1,510	9,200	2,661.00	209,530.00	96,195.87
Calendar Year 1935	12	94.56	6.50	.....	.....	.....	60.00	45.50
Calendar Year 1936	52	108,894.48	165,465.00	7,573	.....	885,192.00	764,594.00	1,504,273.45
Calendar Year 1937	17	387.38	90.00	.....	25	37,500.00	8.50	292.05
TOTALS	239	\$180,571.68	271,616.105	11,488.25	29,375	954,683.98	1,195,360.10	\$1,860,117.69

## SUMMARY OF FIRE LOSSES OUTSIDE ALBERTA FOREST RESERVES

October 1, 1930 to March 31, 1931	47	\$ 686.64	11,145.19	155.00	104,199.00	3.75	684,625.5	\$ 79,950.85
April 1, 1931 to December 31, 1931	591	82,088.89	532,658.07	134,536.00	12,215.00	122,690.5	132,743.00	712,835.79
Calendar Year 1932	347	15,320.51	133,562.14	274.75	13,973.50	40,627.15	59,545.00	152,085.58
Calendar Year 1933	249	16,971.75	64,489.12	4,383.50	3,159.00	41,694.50	14,464.00	100,008.43
Calendar Year 1934	193	7,050.51	36,907.00	3,404.50	1,105.00	547.50	5,371.00	29,825.77
Calendar Year 1935	85	1,538.90	6,313.25	160.00	23,116.00	1,513.00	6,017.00	5,722.50
Calendar Year 1936	196	13,647.81	38,989.00	2,374.00	33,113.00	251,544.00	609,837.00	45,656.85
Calendar Year 1937	358	54,952.28	835,169.00	14,702.00	.....	.....	.....	1,088,173.90
TOTALS	2,066	\$192,277.29	1,679,232.77	159,989.75	190,950.50	459,279.40	1,512,602.50	\$2,214,259.67

## SUMMARY OF FIRE LOSSES WITHIN AND OUTSIDE ALBERTA FOREST RESERVES

October 1, 1930 to March 31, 1931	56	\$ 1,238.31	11,187.115	155.00	107,285.00	5.75	129.00	\$ 80,022.54
April 1, 1931 to December 31, 1931	622	99,713.01	604,876.12	136,906.5	12,215.00	128,986.23	796,224.5	867,487.26
Calendar Year 1932	328	18,811.53	136,117.89	282.75	15,154.50	44,473.15	133,748.60	160,876.31
Calendar Year 1933	288	53,381.67	93,765.00	4,102.25	12,359.00	60,882.75	167,959.00	195,805.36
Calendar Year 1934	240	38,169.02	58,870.00	4,914.50	12,359.00	3,208.50	234,014.00	126,021.64
Calendar Year 1935	97	1,653.46	6,319.75	160.00	1,193.00	1,513.00	5,431.00	5,768.00
Calendar Year 1936	248	122,542.29	204,454.00	9,947.00	23,141.00	885,851.00	770,611.00	1,549,930.30
Calendar Year 1937	375	55,339.66	835,259.00	14,702.00	33,113.00	289,044.00	609,845.50	1,088,465.95
TOTALS	2,305	\$372,848.97	1,950,848.875	171,478.00	220,322.50	1,413,963.38	2,707,962.60	\$4,074,377.36

Details concerned with fire seasons, forest protection, fire prevention, fire suppression, causes and fire-fighting equipment appear in the Forestry section of this Report.

*Timber Industry.*—In spite of an increased demand in Ontario and the United States for Alberta lumber—which materialized in an increase of 40 per cent in the manufacture of sawn lumber from timber cut on provincial lands—neither prices nor the demand were sustained. At the end of the year price levels were at a very low ebb and Alberta manufacturers found their yards heavily stocked with little demand in sight.

Increased production was evident also in mine timber, lath and some of the other timber products but the manufacture of railway ties dropped approximately 15 per cent from last year's figures. Contract prices on railway ties remained unchanged from the preceding year.

*Grazing on Forest Reserves.*—A decrease in grazing within the forest reserves is shown as a direct result of succeeding years of drought in southern Alberta which reduced the normal carrying capacity of livestock range.

Cattle grazed show a decrease of 4,486 from last year and sheep 2,269, though an increase of 977 is given for horses. Grazing permits issued were increased by 32 in comparison with the previous year.

*Nursery and Tree Distribution.*—As in previous years the transplanting of seedlings was carried out at Oliver and at the subsidiary nurseries at Fort Saskatchewan and Lethbridge.

With the absence of June rains the same high degree of success, experienced in past years, failed to materialize.

Lethbridge, however, is to be excepted from this statement where with water available for irrigation purposes, the same or even better success as in previous years was obtained.

*Youth Forestry Training Project.*—Following an agreement between the dominion and the province, by which each authority undertook to meet half the cost, the Youth Forestry Training Project was launched and a camp site on the Highwood River within the Rocky Mountains Forest Reserve was chosen.

The young men enrolled numbered 60, chosen from a group of several hundred applicants, and were sent to the Highwood camp for a period of training. Details under this particular heading are given in the Forestry section of this Report.

*Game.*—The administration of game, though only occupying a few weeks of the period under review as far as this Department was concerned, is nevertheless dealt with at the end of the Forestry section.

#### COAL

The output of coal produced from Alberta mines during the calendar year, 1937 was 5,551,682 tons which carried a valuation of \$14,434,969.75, showing a decrease of 144,693 tons from the preceding year. Coal mined by farmers under permit for their own use totalled 1,883 tons, which is not included in the above total production figure for the year just quoted. A considerable tonnage in addition to this, and of which there is no record, was produced during the year by farmers without either permit or lease.

Production of coke for the calendar year, 1937 increased by 728 tons and of briquettes by 6,029 tons.

*Disposition of Coal.*—Coal sold for consumption in Alberta totalled 1,326,054 tons; sold for consumption in other Canadian provinces, 1,855,392 tons; sold for



consumption in the United States, 41,328 tons; sold to railway companies for locomotive use, 2,028,389 tons; used for making briquettes, 25,402 tons; used for making coke, 99,537 tons; used under colliery boilers, 145,967 tons; used by colliery railways, 6,022 tons; put to stock, 48,501 tons; put to waste, 35,797 tons. The above tonnages include coal lifted from stock and waste heaps, which is not included in the total output.

## COAL PRODUCTION

Calendar Year	Tonnage	Valuation
1930 .....	5,755,911	\$19,379,000.00
1931 .....	4,564,290	13,415,745.00
1932 .....	4,870,030	13,441,193.00
1933 .....	4,714,784	12,197,339.00
1934 .....	4,748,848	12,440,616.53
1935 .....	5,462,973	13,946,338.15
1936 .....	5,696,375	14,720,004.06
1937 .....	5,551,682	14,434,969.75
<b>TOTALS</b> .....	<b>41,364,893</b>	<b>\$113,975,205.49</b>
Decreases this year in comparison with last	144,693	\$ 285,034.31

## PRODUCTION OF COKE AND BRIQUETTES

Calendar Year	Coke (Tons)	Briquettes (Tons)
1930 .....	.....	24,111
1931 .....	.....	15,102
1932 .....	2,183	13,582
1933 .....	49,279	16,104
1934 .....	59,703	15,906
1935 .....	63,428	18,812
1936 .....	65,239	21,015
1937 .....	65,967	27,044
<b>TOTALS</b> .....	<b>305,799</b>	<b>151,676</b>
Increases this year in comparison with last .....	728	6,029

*Disposition of Electrical Power.*—Purchased electrical power used by Alberta coal-mines during the calendar year, 1937 totalled 25,483,749 k.w. hrs.

## ELECTRICAL POWER USED FOR OPERATION OF ALBERTA COAL-MINES

Calendar Year	K.w.hrs.
1930 .....	25,003,606
1931 .....	16,918,625
1932 .....	14,875,890
1933 .....	17,611,959
1934 .....	19,447,621
1935 .....	23,111,373
1936 .....	24,912,243
1937 .....	25,483,749
<b>TOTAL</b> .....	<b>167,365,066</b>
Increase this year in comparison with last .....	571,506

## SHALE AND CLAY MINED

During the calendar year, 1937 there were four shale pits in operation. Production from these pits totalled 27,144 tons of shale from which 9,946,794 bricks and 252 tons of hollow tile were manufactured.

Calendar Year	Shale Mined (Tons)	Bricks Manufactured (Number)	Tiles Manufactured (Tons)
1930 .....	67,517	22,007,045	.....
1931 .....	23,855	7,091,080	2,825
1932 .....	8,446	3,444,010	182
1933 .....	3,234	1,221,060	.....
1934 .....	13,561	4,398,032	1,171
1935 .....	20,258	7,349,300	.....
1936 .....	24,588	8,963,384	.....
1937 .....	27,144	9,946,794	252
<b>TOTALS</b> .....	<b>188,603</b>	<b>64,420,705</b>	<b>4,430</b>
Increases this year in comparison with last ...	2,556	983,410	252

*Mines Branch Annual Report.*—Statistical information covering Alberta's coal-mining activities and production of shale and clay mined for the calendar year, 1937 is given in complete detail in the published Annual Report of the Mines Branch, Department of Lands and Mines, for this period which appears as a separate publication to this Report.

STAFF

I would like to repeat the expression of appreciation which was offered to the staff of this Department last year at the conclusion of my Report. In it reference was made to loyal and intensive application to the various duties of this Department.

Individual detailed reports from the various Divisions of the Department follow.

Your obedient servant,

J. HARVIE,

*Deputy Minister.*

Edmonton, December 2nd, 1938.

# THE OIL AND GAS RESOURCES CONSERVATION ACT

1938

(Second Session)

## Chapter 1.

### An Act for the Conservation of the Oil and Gas Resources of the Province of Alberta.

(Assented to November 22, 1938.)

**H**IS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Alberta, enacts as follows:

**1.** This Act may be cited as "*The Oil and Gas Resources Conservation Act*." Short title

**2.** In this Act unless the context requires a contrary meaning,— Definitions

- (a) "Board" means the Board constituted by this Act and appointed pursuant thereto; "Board"
- (b) "Owner" when used in connection with any well in addition to its ordinary meaning, includes the person who is entitled to dispose of any production of any petroleum from such well or property, or who would be so entitled in the absence of any contract governing the disposition of such production; "Owner"
- (c) "Petroleum" in addition to its ordinary meaning includes any mineral oil or relative hydrocarbon and natural gas existing in its natural condition in strata, but does not include coal or bituminous shales or other stratified deposits from which oil can be extracted by destructive distillation; "Petroleum"
- (d) "Well" means any made orifice in the ground made by drilling, boring or in any other manner, from which any petroleum is obtained or obtainable or which is being so made for the purpose of obtaining any petroleum. "Well"

**3.** The intent, purpose and object of this Act is to effect the conservation of oil resources and gas resources or both in the Province by the control or regulation of the production of oil or gas or both, whether by restriction or prohibition and whether generally or with respect to any specified area or any specified well or wells or by repressuring of any oil field, gas field or oil gas field and, incidentally thereto, providing for the compulsory purchase of any well or wells. Intent, purpose and object of Act

**4.** This Act applies to every well as defined in this Act situated in the Province whether made before or after the coming into force of this Act from which any petroleum is obtained or is obtainable or which is being made for the purpose of obtaining or producing any petroleum. Application of Act

## PART I.

RELATING TO THE CONSERVATION OF OIL RESOURCES AND  
GAS RESOURCESConstitution  
of Board

**5.** In order to effect the intent, purpose and object of this Act there is hereby constituted a Board to be called "The Petroleum and Natural Gas Conservation Board," which shall be a body politic and corporate.

Membership  
of Board

**6.—(1)** The Board shall consist of not more than three members of whom one shall be the chairman.

First  
members  
thereof

(2) The first members of the Board shall be William F. Knode, Fred G. Cottle and Charles W. Dingman, of whom the first named shall be the chairman; the said William F. Knode shall hold office until the 30th day of June, 1939, and thereafter during the pleasure of the Lieutenant Governor in Council; the said Fred G. Cottle and Charles W. Dingman shall hold office until the 30th day of June, 1943, and thereafter during the pleasure of the Lieutenant Governor in Council.

Vacancies  
therein

(3) In the event of any vacancy occurring in the membership of the Board the Lieutenant Governor in Council may appoint a person to fill such vacancy; and in case the office of chairman becomes vacant, the Lieutenant Governor in Council shall appoint such person or any other member of the Board as chairman thereof; and every person so appointed shall hold office for the term of five years from the date of his appointment and thereafter during the pleasure of the Lieutenant Governor in Council.

Removal of  
members

(4) Notwithstanding anything contained in this section the chairman, as well as any other member of the Board, may be removed from office by the Lieutenant Governor in Council at any time upon the address of the Legislative Assembly.

Remuneration  
of chairman  
and members

**7.** The chairman and each other member of the Board shall receive such remuneration as may be fixed by the Lieutenant Governor in Council.

Prohibition  
of certain  
interests of  
chairman and  
members

**8.** Neither the chairman nor any other member of the Board shall have any monetary interest of any description, directly or indirectly, in any property or in any business or undertaking carried on for the purpose of searching for, winning or getting, or for the purpose of gathering, collecting, processing, handling or distributing any petroleum in the Province.

Resignation of  
deputy  
chairman and  
appointment of  
*pro tempore*  
member

**9.** The Lieutenant Governor in Council may from time to time,—

(a) designate any member of the Board as the deputy chairman thereof;

(b) in the case of death, illness or absence from the Province of Alberta of a member of the Board or of his inability to act from any cause, appoint some person to act *pro tempore* in his stead and the person so appointed shall during the period for which he is so appointed have all the powers and perform all the duties of a member of the Board.

**10.** The office of the Board shall be at such place as may from Board office time to time be approved by the Lieutenant Governor in Council.

**11.—**(1) Meetings of the Board shall be held at the call of the Board chairman, or in his absence the deputy chairman, at such place or meetings places and upon such notice as to the chairman seems proper.

(2) The chairman, or in his absence the deputy chairman, shall call a meeting of the Board immediately upon being requested so to do in writing by the other members of the Board.

(3) The chairman, or in his absence the deputy chairman, and one other member of the Board shall constitute a quorum at any meeting of the Board.

**12.—**(1) The chairman shall be the executive officer of the Board and shall sign all orders or directions issued by authority of the Board and shall have full power to act for, on behalf of, and in the name of the Board in the execution, performance and carrying out of any act, matter or thing which is within the power of the Board subject only to such express directions or decisions as may have been given or made by a resolution of the Board passed at a regularly held meeting thereof. The chairman the executive officer of the Board

(2) At any time during which the office of chairman is vacant, Powers, duties and functions of the deputy chairman or the chairman is absent from the Province, or is incapacitated for any reason from executing his functions as chairman, the deputy chairman shall have and exercise all the powers, duties and functions which are by this Act conferred upon the chairman.

(3) Any order or direction or other document purporting to be used by authority of the Board shall when signed by the chairman or deputy chairman be admitted as evidence of the contents thereof without any proof of the signature of the chairman or deputy chairman, as the case may be, or of the authority of the chairman or deputy chairman, as the case may be, to sign the same. Evidential value of certain documents when signed by the chairman or deputy chairman

**13.** The Board is hereby authorized and empowered to perform, execute and carry out all the duties, powers and functions imposed or conferred upon the Board by this Act, and for that purpose to do all and any acts and things which are necessary for or incidental to the performance, execution or carrying out of any such duty, power or function. General powers of Board

**14.—**(1) The Board shall keep at its office,—

- (a) full and complete minutes of all business transacted at its meetings;
- (b) full and complete accounts and records of all the financial business of the Board.

Minutes of meetings and accounts and records of financial business

(2) All such minutes, accounts and records shall be deemed to be of so public a nature as to be admissible in evidence by the mere production thereof by the Board or by any employee thereof authorized by the Board to produce the same.

**15.** The Board is hereby authorized and empowered,—

- (a) to appoint such officers, servants and employees as the Board deems necessary for the transaction of its business and to prescribe their duties, conditions of employment and remuneration;

Power of Board to appoint officers, obtain services of professional persons and to make enquiries

- (b) to obtain the services of such engineers, accountants and other professional persons as the Board deems necessary for the proper and convenient transaction of its business;
- (c) to make from time to time such enquiries and investigations into all or any of the following matters, namely; the production, transportation and distribution of petroleum or any classification thereof in the Province at such places and at such times and in such manner as may seem advisable to the Board.

Power to control and regulate the production of petroleum

**16.**—(1) In order to effect the intent, purpose and object of this Act, the Board is hereby authorized and empowered with the approval of the Lieutenant Governor in Council to control and regulate the production of petroleum either by restriction or prohibition or both, or to repressure any oil field, gas field or oil gas field and, incidentally thereto, to provide for the compulsory purchase of any well or wells, and for such purposes to make such orders and regulations as the Board deems requisite.

Revocation of orders or regulations by Order in Council

(2) The Lieutenant Governor in Council may revoke any order or regulation made pursuant to this section.

Compensation schemes

**17.**—(1) Within six months after the date upon which this Act comes into force, and at any other time upon the direction of the Lieutenant Governor in Council, the Board shall proceed to prepare a scheme or schemes for the provision of compensation for persons who are injured by reason of any conservation orders made pursuant to this Act, and submit every such scheme to the Lieutenant Governor in Council.

Approval of scheme and establishment thereof

(2) The Lieutenant Governor in Council may approve any scheme so prepared, and upon such scheme being so approved may establish the same and thereupon the scheme so established shall have the same force and effect as if it had been enacted as a part of this Act.

Revocation of scheme

(3) The Lieutenant Governor in Council may from time to time vary, amend and revoke any scheme previously approved.

Powers conferable on Board

(4) The Lieutenant Governor in Council may confer upon and vest in the Board any power which may be considered necessary or advisable to enable the Board to carry out the provisions of any such scheme.

Schemes general or restricted in application

(5) Any scheme may be general in its application, or may be restricted to such wells or classifications of wells in such part or parts of the Province as may be designated thereby.

Provisions of scheme as to certain matters

(6) In any scheme provision may be made for all or any of the following matters:

- (a) The circumstances and conditions under which any person is entitled to receive compensation under the scheme;
- (b) The matters in respect of which any compensation is payable and the method in which the amount of any such compensation shall be ascertained;
- (c) The conditions subject to which any compensation is to be paid to any person;

- (d) The manner in which compensation is to be payable;
- (e) The persons by whom any such compensation shall be payable;
- (f) The apportionment between all the persons by whom compensation is payable, of the amount thereof payable by each such person;
- (g) Such other matters or things as may be necessary for the purpose of carrying out the scheme.

(7) For the purpose of raising any money required for the payment of compensation under any scheme, the Board shall levy the amount thereof by means of a uniform rate on the dollar upon the assessed value of all the petroleum property of the persons who are liable under the scheme for the payment of such compensation, and all the provisions of Part III of this Act relating to the levying and collection of any tax imposed pursuant thereto shall, *mutatis mutandis*, apply to any levy made pursuant to this section.

Raising of money required for compensation

**18.**—(1) Every person who is the owner of any well in the Province may register with the Board an address for service in the Province of Alberta of all notices and orders made pursuant to this Act affecting or respecting any well of which such person is the owner.

Registration of address for service

(2) All notices and orders affecting or respecting any well shall be deemed to have been served upon the owner of such well upon the delivery thereof at his registered address for service or in case the same is sent by mail upon the expiration of twenty-four hours, exclusive of Sundays and holidays, from the time of sending such notice or order by prepaid mail to such owner at his registered address for service.

Service of notices and orders at address for service

**19.** If there be no registered address for service as aforesaid, in respect of any well, all notices and orders respecting such well shall be posted up in any part of the office of the Board to which the public has access and shall be kept so posted up for twenty-four hours, exclusive of Sundays and holidays, and upon the expiration of the said period shall be deemed to have been duly served upon the owner of such well.

Service of notices and orders where no address for service

**20.**—(1) Every person who is the owner of a producing well, shall keep at his office or other place of business within the Province, complete and accurate records of the production of all petroleum from his well and of the disposition made thereof.

Keeping of production records by owners of wells;

(2) Every person who is the owner or who has the control or management of any refinery in the Province shall keep at his office or other place of business in the Province records of all petroleum received into such refinery and of the names and addresses of the persons from whom such petroleum was so received, the quantity and quality of the petroleum received from each such person, and the price payable in respect thereof, and the disposition of all products obtained from refining the same, and every disposition made thereof.

and by refiners;

(3) Every person who is by this section required to keep records shall produce such records at all reasonable times when requested so

and duty to produce the same

to do by any member of the Board, or any person authorized by the Board, and shall afford such member or person facilities for inspecting the same and making copies thereof and taking extracts therefrom.

Requisition  
by Board from  
Government  
Departments  
of information

**21.** The Board shall be entitled to require from any Department of the Government Service any information required by the Board for the purpose of carrying out the duties and exercising the powers imposed or conferred upon the Board by this Act, and every official of every such Department shall, subject to the approval of the Minister presiding over the same, give to the Board such assistance as he is able to afford and the Board may require.

## PART II.

### POWERS AND DUTIES OF THE BOARD IN RESPECT OF THE OIL AND GAS WELLS ACT, 1931.

Enforcement  
by Board of  
regulations  
under *The Oil  
and Gas Wells  
Act, 1931*

**22.**—(1) It shall be the duty of the Board and it shall have the power to undertake the enforcement of any regulations made pursuant to The Oil and Gas Wells Act, 1931, whenever the Lieutenant Governor in Council directs the Board so to do or designates the Board in any such regulations as the person by whom the regulation shall be enforced or by whom any act or thing, the doing of which is authorized or required by any such regulation shall be done.

Defrayal of  
expenditures

(2) The expenditures incurred by the Board in respect of the enforcement of any such regulations shall be payable to the Board by the Provincial Treasurer out of such sums as may be appropriated by the Legislature for the purpose.

## PART III.

### ASSESSMENT AND TAXATION OF PETROLEUM PROPERTIES.

Definitions of  
"petroleum  
property"

**23.** In this part of this Act unless the context otherwise requires, the expression "petroleum property" means the right, title, estate or interest of any person to or in any petroleum which is in the earth in the Province, and includes,—

- (i) every kind and description of right of any person to search for, win, get and retain any such petroleum, whether such right is incidental to the ownership of any land or is created by any lease, permit, contract or otherwise howsoever, and includes all buildings, structures, and erections, used for the purpose of searching for, winning, getting and retaining any such petroleum; and
- (ii) every right, title, estate, interest or benefit reserved, acquired or retained upon the making of any sale, lease, sublease, assignment, license or any other arrangement relating to the disposition of any right, title, estate or interest to or in any such petroleum, and any interest of the Crown under any sale, grant, lease, license, or permit made or issued by the Crown in respect of any such petroleum.



**24.** All petroleum property in the Province which is not by this Act expressly exempted, shall be liable to assessment and taxation for the purposes of this Act.

Liability of petroleum property to assessment and taxation

**25.** All petroleum property situate in any part of the Province for the time being designated by any order of the Lieutenant Governor in Council as a part of the Province in which such property is exempt from assessment under this Act shall so long as such order remains in force be exempt from assessment and taxation under this Act.

Exemption from assessment and taxation

**26.**—(1) Every person who is the owner of any petroleum property liable to assessment and taxation under this Act shall not later than the thirty-first day of December in the year 1938, and not later than the thirtieth day of June in every year thereafter, without any notice or demand, deliver to the Board a detailed statement in writing which shall be in such form as the Board may require, setting out,—

Statements to be furnished by owners of petroleum property

- (a) the legal description of the land to which such petroleum property relates;
- (b) the right, estate, or interest of the owner, with sufficient particulars of the title of such person to such petroleum property;
- (c) the rentals and royalties payable by such person in respect of such petroleum property to any other person or persons and the name and address of each such person;
- (d) particulars of all buildings, structures and erections used for the purpose of searching for, winning, getting and retaining any petroleum product to which the petroleum property relates;
- (e) in case the owner of the petroleum property is a corporate body, the last balance sheet prepared pursuant to the provisions of *The Companies Act*, 1929, or any other statute applicable to the corporation;
- (f) such further additional information as the Board may require.

(2) In the case of a corporation, association or other corporate body, every such return shall be made and signed by the President, Secretary, Treasurer or other responsible officer having knowledge of the affairs of such corporation, association, or other body, or by such other person or persons employed thereby or connected with its business as the Board may require.

Requirement as to signing in case of a corporation

(3) The Board may prescribe the forms on which such returns shall be made or furnished, and may enlarge the time for making any return under this Act.

Prescription by Board of forms of returns

**27.**—(1) The Lieutenant Governor in Council may from time to time appoint an assessor for the purposes of this part, who may be a member of the Board, and prescribe his remuneration which shall be payable by the Board.

Appointment of assessor

Assessments  
and prepara-  
tion of assess-  
ment roll

(2) In the year 1939 as soon as is practicable after the first day of February and in each subsequent year as soon as is practicable after the thirtieth day of June, the assessor shall proceed to assess at its fair actual value each petroleum property liable to assessment and taxation, and shall prepare an assessment roll setting out thereon a brief description of each petroleum property assessed, the name and address of the owners thereof, and the assessed value thereof.

Powers of  
assessor as to  
assessments

(3) In making such assessments the assessor may accept or disregard either wholly or in part any statements furnished pursuant to section 26, and may take any steps which he in his discretion considers necessary for the purpose of ascertaining the fair actual value of the assessed property, and for that purpose may resort to all sources of available information, and may fix such amount as appears to him to be just and equitable.

Certification  
and delivery  
to Board of  
assessment  
roll

**28.** Upon the completion of the assessment roll the assessor shall endorse thereon or attach thereto a certificate setting out the date upon which the roll was so completed, and sign the same and deliver the same to the Board.

Duties of  
Board as to  
the fixing of  
date for  
revision of  
assessment  
roll, the  
posting up  
thereof, and  
the sending  
out of  
assessment  
notices

**29.** The Board shall as soon as may be after the delivery of the assessment roll, fix a day, time and place for the revision of the assessment roll which shall not be earlier than the thirtieth day after the day upon which the assessment roll is so delivered, and shall cause a copy of the assessment roll and the certificate endorsed thereon together with a notice of the day, time and place so fixed for the revision of the assessment roll to be posted up in a conspicuous place in any part of the offices of the Board to which the public have access and shall keep the same so posted up for twenty days and shall within ten days after the posting up of the assessment roll cause to be sent by mail to every person whose name appears on the assessment roll as the owner of any petroleum property, an assessment notice containing the particulars appearing in the roll with respect to such petroleum property, and a notice setting out the day, time and place fixed for the revision of the assessment roll, together with a copy of the next ensuing section.

Notice of  
application  
to Board to  
vary assess-  
ment roll

**30.** Any person whose name appears upon the assessment roll as a person assessed may apply to the Board to vary the assessment roll and to alter any assessment shown thereon which he alleges to be improperly assessed, or to assess any property which he alleges is liable to be and has not been assessed, and to include the same in the assessment roll, upon giving the Board notice in writing within twenty days after the date upon which the assessment roll was first posted up pursuant to the last section.

Determination  
by Board of  
applications  
to vary the  
assessment  
roll upon  
revision

**31.** At the time and place fixed for the revision of the assessment roll or at any adjournment thereof, the Board shall proceed to hear and determine every application of which notice has been given in conformity to the last preceding section, and to make such disposition thereof as the Board may in its discretion deem fit and proper.

**32.**—(1) As soon as the Board shall have disposed of all such applications as aforesaid, it shall proceed to revise the assessment roll in accordance with the dispositions made by the Board of such applications and thereupon shall cause to be attached to the assignment roll so revised a certificate which may be in the following form: Revision of assessment roll and certification thereof by the Board

"This is to certify that the assessment roll hereto annexed is the assessment roll for the year 19..... as revised by the Petroleum and Natural Gas Conservation Board.

"Dated at the office of the Board this..... day of....., 19.....

"The Petroleum and Natural  
Gas Conservation Board, by

.....  
Chairman."

(2) The assessment roll so revised and every assessment matter and thing set out therein and the certificate attached thereto shall be conclusive and binding upon all persons mentioned therein or affected thereby, and shall not be questioned in any proceedings in any Court as to any statement, matter or thing contained therein whatsoever. Conclusiveness of revised assessment roll

**33.**—(1) In the year 1939 and as soon as may be after the 30th day of June and not later than the 30th day of September, the Board shall proceed to levy a tax at the rate of ten mills on the dollar upon the assessed value of all properties on the assessment roll as certified by the Board or at such lesser uniform rate as will produce a sufficient sum to meet the expenditures incurred by the Board under this Act in the year ending the 30th day of June, 1939, together with the expenditures incurred by the Board constituted by *The Oil and Gas Wells Act*, 1938, under that Act in the year ending the 30th day of June, 1939, but exclusive of expenditures in respect of any of the matters set out in Part II of this Act. Levy by Board in 1939

(2) In every year thereafter the Board shall as soon as may be after the 30th day of June and not later than the 30th day of September proceed to levy a tax at the rate of ten mills on the dollar upon the assessed value of all properties on the assessment roll as certified by the Board in that year or at such lesser uniform rate as will produce a sufficient sum to defray the expenditures incurred by the Board under this Act in the year ending on the 30th day of June in that year, exclusive of expenditures in respect of any matters set out in Part II of this Act. Levy by the Board in subsequent years

**34.** As soon as may be after the Board has struck the rate it shall cause to be sent by mail to every person whose name appears on the assessment roll as the owner of any assessable petroleum property a notice containing a brief description of the petroleum property in respect to which such person is assessed, the amount of the tax payable in respect thereof, and a demand for the payment of the tax. Tax demand

Penalties  
for non-  
payment of  
tax

**35.—**(1) In the event of any of the taxes imposed under this Act remaining unpaid after the expiration of the sixty days after the date of mailing the notice referred to in section 34, there shall be added thereto, by way of penalty, a sum equal to five per cent of the amount of taxes unpaid, and in the event of any taxes or penalties, or any part thereof remaining unpaid after the expiration of one hundred and twenty days after the date of such mailing, there shall be added thereto, by way of penalty, an additional sum equal to five per cent of the amount of such taxes and penalties at that date remaining unpaid, and such amount or amounts so added shall form part of the taxes which are created a special lien upon the petroleum property in respect of which the same are payable under the provisions of this Act.

Construction  
of section

(2) Nothing in this section contained shall be construed to extend the time for payment of the said taxes, nor in any way to impair the right of distress, nor any other remedy provided by this Act, for the collection of said taxes.

Power of  
Board to  
order seizure  
of petroleum  
to enforce  
payment of  
tax

**36.** In any case where the tax payable to the Board in respect of any petroleum property or any interest therein is not paid within thirty days after the date of mailing the notice referred to in section 34 the Board may order that from and after a date fixed by the Board all petroleum or any specified kind or kinds thereof produced from any well owned or operated by a person who is liable to the payments of such tax shall be delivered to the Board or to such person or persons who may be designated by the Board, and shall be sold in such manner and at such price as the Board may direct until such time as the Board has received out of the proceeds of sale or otherwise the full amount of the tax together with any penalties thereon and such further amount as the Board may fix as the amount of the expenses of the Board in relation to any act, matter or thing done in pursuance of this section.

Ownership of  
petroleum  
affected by  
an order  
made under  
section 36

**37.** Upon the making of any order pursuant to section 36, from the date so fixed by the Board until such time as the Board has received the full amount of the tax together with any penalties thereon and the expenses of the Board, the petroleum to which the order relates shall become the property of the Board, and shall be freed and discharged from all claims and demands of every other person howsoever and whensoever created.

Tax a charge  
on petroleum  
property

**38.** The tax payable in respect of any petroleum property shall be a charge thereon having priority over all other claims and demands of any person other than the Crown.

Penalties  
for non-  
compliance  
with  
section 26

**39.** In case any person who is required under the provisions of section 26 hereof to make or furnish any statement or information does not comply with the provisions of the said section, the Board may by order impose upon any such person a penalty of not more than \$10.00 per day for each day during which such default is made, which penalty or sum shall be added to and become a part of the tax imposed by this Act, and may further order that any such person shall pay a tax of double the amount of the tax payable in respect of the petroleum property to which such statement or information relates.

**40.** —(1) In case any question of law arises with respect to any decision of the Board made pursuant to any provision of this Part, any person affected thereby may within thirty days after the date upon which such decision was made give notice in writing to the Board requiring the question to be referred to a Judge of the Supreme Court of Alberta.

Reference to  
a Judge of  
the Supreme  
Court of  
certain  
questions of  
law

(2) Upon the receipt of any such notice the Board shall cause an application to be made to a Judge to fix the day, time and place for proceeding with the reference and for directions as to the notice thereof to be given and the persons to be given notice and the manner in which such notice is to be given.

Application  
by Board

(3) Upon the day, time and place so fixed or at any other day, time and place to which the hearing is from time to time adjourned the Judge shall proceed to determine the question in a summary manner, and for that purpose may take evidence either orally or by affidavit and shall make such order to determine such question as he deems proper.

Determination  
of question  
by order of  
Judge

(4) Every order made by a Judge under this section shall be final and conclusive and there shall be no appeal therefrom.

Finality of  
order

**41.** The Board is hereby empowered to borrow from time to time on the security of the taxes for the current year which are for the time being uncollected, such sums as may be required for the defrayal of the current expenditures of the Board.

Borrowings  
by Board

**42.** The Lieutenant Governor in Council may authorize and empower the Provincial Treasurer,—

Guarantees  
of borrowings  
of Board by  
Province

(a) to guarantee on behalf of the Province the due payment of any money borrowed pursuant to the last preceding section, together with the interest payable thereon, upon such terms and conditions as may be prescribed by the Lieutenant Governor in Council;

(b) to advance to the Board from time to time out of the General Revenue Fund such sums as may be deemed advisable upon such security, at such rate of interest and such terms and conditions as may be prescribed by the Lieutenant Governor in Council.

Advances to  
Board out of  
General  
Revenue  
Fund

#### PART IV.

##### PROVISIONS OF GENERAL APPLICATION.

**43.** The procedure to be followed and the forms to be used in any inquiry, hearing, meeting, proceeding or other transaction of the Board or upon the making of any order shall be such as the Board may from time to time determine, and as are not inconsistent with any express provision of this Act.

Powers of  
Board as to  
procedure

**44.** Save and except only in cases where it is otherwise expressly provided by this Act the Board shall have the exclusive jurisdiction to examine, inquire into, hear and determine all matters and questions arising under this Act, and every action, decision, and order of the Board with respect to any such matter or question shall be

Exclusive  
jurisdiction  
of Board

final and conclusive and shall not be open to question or review in any court, and no proceeding of or by or before the Board shall be restrained by injunction, prohibition or other process or proceedings in any court or be removable by *certiorari* or otherwise into any court, nor shall any action or proceeding be brought against the Board or any member of the Board or any officer or employee of the Board in respect of any act or thing done in purported pursuance of this Act.

Prohibition  
of production  
at wells  
operated in  
contravention  
of Act or any  
order or  
regulation

**45.** In case the Board is satisfied after an inquiry held upon such notice and to such persons as the Board deems proper, that any well is being operated in such a way that any provision of this Act or of any order or regulation of the Board made pursuant to this Act is contravened or not complied with the Board may order that on and from a date to be fixed by the order no production shall be permitted at such well and that the same shall be shut down and kept shut down until such time as the Board may order to the contrary.

Enforcement  
of orders of  
Board by  
seizure

**46.—(1)** The Board make take such steps and employ such persons as the Board considers necessary for the enforcement of any order made by it and for the purposes thereof may forcibly or otherwise enter upon, seize and take possession of the whole or part of the movable and immovable property in on or about any well or used in connection therewith or appertaining thereto together with the books and offices of the owner thereof, and may, until such order has been complied with, either discontinue all production or may take over the management and control thereof.

Duty of  
officers and  
employees of  
owner of  
seized well

(2) Upon the Board so taking possession of any well and so long as such possession continues, it shall be the duty of every officer and employee of the owner thereof to obey the orders of the Board or of such person or persons as it places in charge and control thereof.

Authority of  
Board upon  
taking  
possession

(3) Upon possession being so taken of any well the Board may take, deal with and dispose of all petroleum produced at such well as if the same were the property of the Board, subject to the obligation to account for the net proceeds thereof to the persons entitled thereto.

Costs of  
proceedings

(4) The costs and expenses of and incidental to proceedings taken by the Board under this section shall be in the discretion of the Board, and the Board may direct by whom and to what extent they shall be paid.

The giving of  
notice and the  
holding of  
hearings not  
requisite in  
case of certain  
orders

**47.—(1)** Unless it is otherwise expressly provided by this Act to the contrary, any order or regulation which the Board is authorized by this Act to make may be made upon its own motion or initiative, and without the giving of any notice, and without holding any hearing.

Power of  
Board to  
make orders  
effective in  
the future or  
upon a con-  
tingency or  
subject to  
conditions

(2) The Board may direct in any order that the same or any portion or provision thereof shall come into force at a future fixed time or upon the happening of any contingency, event, or condition in such order specified, or upon the performance to the satisfaction of the Board or of any person named by it of any terms which the Board may impose upon any party interested, and the Board may

direct that the whole or any portion of such order shall have force for a limited time or until the happening of any specified event.

(3) When any work, act, matter or thing is by any order or regulation of the Board required to be done, performed or completed within a specified time, the Board may, if it thinks proper so to do, extend the time so specified. Extension of time fixed by any order

(4) An order of the Board need not show upon its face that any proceeding or notice was had or taken, or that any circumstances existed necessary to give it jurisdiction to make such order.

**48.** The Board and every member thereof and every other person authorized by the Board to make any inquiry or investigation pursuant to any of the provisions of this Act shall for the purpose of any such investigation or inquiry have all the powers which may be conferred upon a commissioner appointed pursuant to *The Public Inquiries Act* for the purpose of taking evidence on oath or affirmation and compelling the attendance of witnesses and the production of documents. Powers of the Board, its members and persons authorized by the Board in making inquiries and investigations

**49.** The Board and every member thereof and every person authorized by the Board to make any inspection shall be entitled to enter upon and inspect any place which is a well or a place at which any petroleum is refined or is occupied or used in connection with any well or any place at which petroleum is refined at any time between the hour of eight o'clock in the forenoon and six o'clock in the afternoon and at any other time during which any business or operation is being carried on thereat, and to inspect such place and every matter and thing thereon and all books, records and documents found thereon, and every person who prevents or hinders or obstructs the Board or any member thereof or any person so authorized as aforesaid whilst making any such entry and inspection shall be guilty of an offence against this Act. Power of inspection of wells and refineries

**50.** Every person who whether as a principal or otherwise contravenes or makes default in complying with any provisions of this Act or of any order or regulation made pursuant to this Act or who causes either alone or in conjunction or participation with others any owner of any well to contravene or make default in complying with any such provision as last aforesaid or who instructs, orders, directs, or causes any officer, agent or employee of any owner of any well to contravene or to make default in complying with any such provision shall be guilty of an offence against this Act. Certain contraventions and defaults offences

**51.** Every person who contravenes or makes default in complying with any of the provisions of this Act shall be guilty of an offence and shall be liable on summary conviction therefor to a fine of not less than one hundred dollars nor more than one thousand dollars in respect of each such offence and in the case of a continuing offence to a fine of not less than one hundred dollars nor more than one thousand dollars for the first day upon which such offence occurs and of not less than fifty dollars nor more than five hundred dollars for each subsequent day during which the offence continues. Penalties upon summary conviction

Disposition  
of taxes and  
penalties

**52.** All sums of money collected by the Board pursuant to any of the provisions of this Act on account of taxes and all fines imposed pursuant to section 51 shall be the property of the Board and shall be expended in defraying the expenditures of the Board under Part I.

Recoverability  
of moneys  
payable to  
the Board by  
suit

**53.** The Board shall be entitled to recover any moneys payable to the Board pursuant to any provision of this Act as if the same were a debt by action in any court of competent civil jurisdiction.

Power of  
Board as to  
remedies for  
enforcement  
of its orders

**54.** In any case where the Board has pursuant to this Act more than one remedy for the enforcement of any order or for the payment of any money payable pursuant to any order of the Board, the Board may resort to any or all such remedies as it may from time to time think proper, either concurrently or successively until such time as the order has been complied with or the money payable thereunder together with all costs and expenses has been paid and satisfied.

Compulsory  
purchase by  
the Board of  
wells

**55.—(1)** Incidentally to the conservation of oil resources or gas resources or both or to repressuring of any oil field, gas field or oil gas field, and for the purpose of carrying out any order or regulation made by the Board in relation to such conservation or repressuring, the Board is hereby authorized and empowered to purchase any well or wells together with any property or right appurtenant thereto or used in connection therewith which the Board considers requisite.

Notice to  
owner and  
effect thereof

(2) The Board may at any time give notice to the owner of any property which is a well or any real property or any personal property or any right which is used in connection with a well or is appurtenant thereto that the Board requires the same under this section and such notice shall set out the description of the same; and upon the expiration of 30 days from the service of such notice the property mentioned therein shall become and be the absolute property of the Board freed and discharged from all claims and demands whatsoever of all persons other than the Crown.

Price payable  
fixed by  
agreement,  
otherwise by  
arbitration

(3) The price payable by the Board for such property shall be such price as may be agreed upon and in default of agreement, the price shall be determined by arbitration under the provisions of *The Arbitration Act* relating to arbitration by two arbitrators one of whom shall be appointed by the Board and one by the person who was the owner of the property set out in the notice.

Duty of  
arbitrators

(4) In determining the price to be paid by the Board for any property the arbitrators shall ascertain the amount of money at which the property would be accepted in the payment of a just debt and in so doing shall not take into account any loss of production occasioned by any order or regulation of the Board made pursuant to this Act.

Payment of  
money into  
Court in  
certain cases

(5) In case any doubt arises as to the persons entitled to receive any money payable for any such property, or as to the amount payable thereout to any person, the Board shall pay the amount payable by the Board into the Supreme Court of Alberta and thereupon the same shall be paid out to such persons and in such



amount as may be determined by the Court or a judge thereof upon the application of any person claiming to be entitled thereto.

(6) A certificate signed by the Board to the effect that it has acquired any property pursuant to this section shall be conclusive evidence of all facts stated therein. Evidential value of certificate of the Board

**56.** Incidentally to any orders or regulations of the Board made pursuant to section 16, the Board is hereby authorized and empowered,— Certain powers of the Board incidental to orders or regulations made under section 16

- (a) to provide for the voluntary surrender to the Board of the right to produce such amount of production as may be prescribed by the Board and for the resale by the Board of the right so surrendered, upon such terms, in such manner, and to such extent as the Board deems proper, to the owners or operators of other wells, and for the payment of the proceeds of such resales into a compensation fund and for the payment out of such fund of compensation to the persons surrendering such right to produce, having regard to the amount of production so surrendered;
- (b) to negotiate agreements from time to time with the owners of producing wells for the purpose of providing for the payment to the owners of wells who have surrendered to the Board any right to produce from such wells, such compensation as the Board considers fair and reasonable.

**57.** *The Oil and Gas Conservation Act, 1938*, being chapter 15 of the Statutes of Alberta, 1938, is hereby repealed. Repeal

**58.** This Act shall come into force on the day upon which it is assented to. Coming into force of Act

## Provincial Lands Administration

### REPORT OF THE DIRECTOR OF LANDS, J. W. STAFFORD

During this fiscal year no material changes took place in the general administration, and land agencies were still maintained at Calgary, Lethbridge and Peace River with permanent sub-agencies at Bonnyville, Medicine Hat, Rocky Mountain House, Grande Prairie, Athabaska, Lac La Biche, Hines Creek and St. Paul.

In addition to the services granted to settlers at the above enumerated sub-agencies, arrangements were made whereby members of the staff transacted sub-agency business on certain specified dates at the following points: Mayrthorpe, Barrhead, Winfield, Edson, Rycroft, Bay Tree, Spirit River, Breton, Whitemud Creek, High Prairie, Fort Vermilion and Fawcett. A gratifying increase was shown in connection with general business.

The total revenue received to the end of the fiscal year amounted to \$181,412.38 as against \$111,610.39 for the previous fiscal year being an increase of \$69,801.99. Details of this revenue are given in the Accounting Division's section of this Report.

Added to the general administration of provincial lands, this Division maintained a complete filing system and a central registry through which all letters pertaining to the Department were received and from which all outgoing letters were dispatched. During the past year a total of 107,140 letters was received and 173,372 letters were dispatched.

In connection with the Filing Division 6,222 new files were made in addition to filing and indexing correspondence for the Branch. Stencils cut numbered 376 with 145,307 pages mimeographed. Translations for this and other departments numbered 352.

Homestead and other entries granted during the year were as follows:

Homestead entries .....	1,479
Second homestead entries .....	111
Soldier grants .....	10
<b>Total .....</b>	<b>1,600</b>

This total included 585 entries accepted from women.

An increase of approximately 200 homesteads over the previous fiscal year is shown which is very gratifying considering the fact that the granting of homestead entries within the boundaries of the Lethbridge and Calgary agencies has been discontinued as well as in that portion of the Edmonton district lying west of the 5th meridian.

The following statement shows additional work performed during the year:

Applications for cancellation .....	1,223	Accrued area leases issued .....	102
Entries cancelled .....	2,663	Provincial land sales .....	80
Applications for patent received .....	2,063	Townsite leases issued .....	5
Notifications of title issued .....	2,267	Special surface leases issued .....	6
Grazing permits issued .....	915	Licence of occupation .....	9
Hay permits issued .....	1,107	Miscellaneous leases issued .....	16
Cultivation and grazing leases issued .....	33	Assignments registered .....	101

The year's activities in connection with the Grazing Division showed that 82 reports were called for and 62 received. Reports outstanding on the 1st of April, 1938, numbered 45.

The following statement gives the changes in connection with long term grazing leases:

RANCH GRAZING LEASES		
Fiscal Year April 1, 1937 to March 31, 1938		
	Number	Area
Leases as at April 1, 1937 .....	2,782	3,152,126.39
Leases as at March 31, 1938 .....	2,553	3,068,811.87
<i>Analysis</i>		
Leases cancelled .....	413	453,555.98
Changes in area: Removed .....	35,485.89	
Added .....	11,627.70	
		23,858.19
		477,414.17
New leases .....	184	394,099.65
	229	83,314.52

#### CONSOLIDATION OF RENTALS AND TAX ACCOUNTS ON GRAZING LANDS

The annual report for the fiscal year ending March 31, 1937 gave a brief outline of the work being undertaken at that time in connection with the consolidation of rental and tax accounts on grazing lands.

During the past fiscal year ending March 31st, 1938 the Department put into effect the conclusions reached after meetings with the ranchers' representatives.

The rentals had always been collected by this Department, whereas taxes had been collected by the Department of Municipal Affairs covering lands in improvement districts and by the municipal districts where same were organized.

Due to the climatic conditions under which the majority of ranchers had been operating for the past several years, the arrears of rentals and taxes on leases held from this province were considerable and it was necessary to make some adjustment in order to ease the burden on the lessees. In the year 1935 the Department had granted reductions in rental and at that time it made same retroactive to January 1st, 1933. Therefore, when the taxing authorities reported the outstanding taxes on grazing lands to this office, immediate action was taken to grant the same reduction on taxes as had been given in the case of rentals. In addition, all accumulated penalties were written off, together with any interest which had been charged on account of rentals.

Approximately 2,800 ranch accounts were adjusted and the Department communicated the results to each lessee covering his or her individual account. This information was given in a statement which set out the current charges for the year 1937, the accumulated rental arrears to December 31st, 1936, the interest on same, tax arrears to December 31st, 1936, and the penalties, which figures covered the gross amount outstanding. The remissions granted by the Department were then shown and each lessee could clearly see the net balance owing. The lower half of the statement clearly indicated the manner in which the balance was to be paid, and to assist in payment, the Department granted two periods within which to clear off the then current rental and allowed the taxes to stand over until December 15th, 1937. The consolidated arrears of rental and taxes, which had accumulated to December 31st, 1936, were set out as being payable in seven annual instalments, the first of which became due on January 1st, 1938, together with the 1938 current charges.

It is gratifying to record that many of the lessees took advantage of the terms granted and brought their accounts up to date.

Quite a few of the lessees did not hesitate to express their appreciation of the terms covering payment of their accounts and stated that they considered the

consolidation a great benefit as they now had only one account to pay and this assisted them in handling the financial end of their business. It is also to be borne in mind that, previous to the consolidation of the two charges, collections were being made by three different authorities and the cost of this work was far heavier than under the new system.

It is therefore clearly indicated that the future benefit to be derived from this consolidation will be material to the lessee, the former tax-collecting authorities and to this Department through the savings effected.

## School Lands Administration

### REPORT OF THE SUPERINTENDENT OF SCHOOL LANDS,

J. W. STAFFORD

Report for the fiscal year ending March 31st, 1938, in connection with the administration of school lands, is submitted herewith.

In the previous Report attention was called to the amendment to the Provincial Lands Act, which gave the Minister power to give effect to any compromise, adjustment or arrangement made pursuant to The Farmers' Creditors Arrangement Act, 1934, in respect to any agreement for the sale of school lands or to any sum payable under any such agreement on account of principal and interest, or either of them.

As stated last year, no results were obtained in connection with this amendment owing to the fact that the federal government has apparently not yet seen fit to grant the Board of Review under The Farmers' Creditors Arrangement Act authority to make compromises in connection with school lands' sales.

Pursuant to the provisions of section 44 of the said Act an order in council was passed bearing date of Wednesday, May 5th, 1937, appointing a Board, during pleasure, to deal with applications for a compromise, or adjustments in connection with such sales. The Board appointed consists of the following employees of the Government of the Province of Alberta:

William Loree, Chairman of The Debt Adjustment Board,  
J. W. Stafford, Superintendent, School Lands Division,  
T. C. Rankine, Solicitor, Department of Lands and Mines.

Numerous meetings were held by the said Board and during the past fiscal year 694 cases were dealt with in connection with which total reductions were granted to the extent of \$498,864.15 on principal, and \$271,971.10 on interest.

The total net revenue for the fiscal year under review amounted to \$282,469.70, being a decrease of slightly over 13% as compared with last year. Of this revenue the sum of \$48,442.09 was paid on account of principal in connection with school lands' sales with the balance, \$234,027.61, comprising miscellaneous moneys such as interest, timber dues, grazing, other rentals, and similar items.

The reduction in revenue is chiefly attributable to the drought conditions which existed in the south-eastern portion of the province in which many of the lands at present held under sale are located.

No general auction sales were held during the fiscal year under review and only one parcel of land was disposed of by auction sale, which comprised an area of 120.30 acres, and which was disposed of at the rate of \$7.25 per acre, or at a total of \$872.18.

During the year 21 grazing and cultivation leases were issued comprising a total area of 3,526.38 acres and during the same period 131 grazing and cultivation leases were cancelled, comprising a total area of 24,479.725 acres.

In connection with timber operations, 10 timber berths were disposed of by sale from which, together with other berths previously disposed of, the following material was manufactured:

6,050,613 F.B.M. of lumber,  
12,716 railway ties.

A total of 565 timber permits was issued under authority of which was cut

742,494 F.B.M. of lumber,  
4,122 fence posts,  
150 telephone poles,  
1,893 cords of wood,  
16,157 railway ties,  
40,000 shingles,

with small quantities of mine props, shingle bolts, lath bolts, and other products.

Timber seizures numbered 32, covering

442,980 F.B.M. of lumber,  
522 railway ties,  
3,905 fence posts,

with small quantities of mine props, lagging, mine ties, and other products.

In connection with hay, a total of 451 permits was issued authorizing the cutting of 4,515 tons, under authority of which 3,131 tons were cut.

Hay seizures numbered 6 covering a total of 74½ tons.

In addition to maintaining a complete set of land records and a complete filing system in this Division, the following further transactions were completed in connection with the administration of school lands:

Number of assignments registered .....	80	Hay permits issued .....	451
Cultivation and grazing leases issued ...	21	Timber permits issued ..	565
Cultivation and grazing leases cancelled ..	131	Timber seizures .....	32
Grazing permits issued .....	2,110	Hay seizures .....	6

Letters dispatched—38,740.

## Mining Lands Administration

### REPORT OF THE SUPERINTENDENT OF MINING LANDS, J. W. HAMILTON

The granting of leases to mining rights, the property of the crown, in the right of the Province of Alberta, is becoming a matter of increasing importance and complexity.

During the past fiscal year the greatest activity was again in connection with petroleum and natural gas leases. However, the major mining industry of the province is still the mining of coal, but if the number of producing oil wells continues to increase as evidenced during the year under review, this supremacy may not be long maintained.

The quantity of coal produced during the 1937 calendar year is officially recorded as 5,551,682 tons, petroleum 2,796,908 barrels, sand and gravel 1,040,822 tons, sodium sulphate 42 tons and bituminous sands 35 tons.

The total value of minerals produced in the province during the calendar year as reported by the Dominion Bureau of Statistics, was approximately \$25,328,640 of which amount coal produced was valued at \$14,434,969 and petroleum, \$4,913,960, the balance being made up of natural gas, cement, lime, sand, gravel, stone and clay products.

All mineral rights, solid, liquid and gaseous, the property of the crown, are disposed of by lease, licence, permit or reservation for limited periods of time and not by sale, and the Mining Lands Division is charged with the administration of regulations governing these rights on both provincial and school lands. The sources of revenue are fees, rentals, bonuses and royalties, and from these sources there was collected during the fiscal year the sum of \$893,588.57, an increase of \$22,876.41 over the previous year.

The enormous increase in the production of crude oil in the Turner Valley field, with the consequent increase in petroleum royalty, accounts for most of the increase in revenue. Compared with a total of \$108,935.28 for last year, the petroleum royalty revenue for this fiscal year amounted to \$273,524.10 being made up of \$249,266.53 royalty on provincial leases and \$24,257.57 on school leases. The royalty paid on school lands' leases shows a very marked increase, having risen from last year's total of \$614.09 to the present total. A reduction appears in the total amount received on account of petroleum and natural gas lease fees and rentals. This is due to an abatement in the leasing activity and also to the relinquishment by lessees of the rights acquired the previous year.

The following tabulations show the numbers and acreage of the various leases issued from October 1st, 1930, the date the natural resources were transferred to the Province of Alberta, to March 31st, 1938.

## DEPARTMENT OF LANDS AND MINES

Type of Lease	Active at date of transfer	Issued	Divided	Cancelled	Renewed	Active at March 31st, 1938
Petroleum and natural gas, provincial lands .....	16,899	5,720	132	16,716	123	5,912
Petroleum and natural gas, school lands .....	1,964	699	4	2,060	1	606
Petroleum and natural gas, crown reserve .....	5	20	.....	25	.....	.....
Coal, provincial lands .....	620	302	2	457	91	376
Coal, school lands .....	60	23	.....	42	7	34
Quarrying .....	45	32	.....	31	.....	46
Quartz mining .....	4	.....	.....	.....	.....	4
Salt and gypsum .....	1	1	.....	1	.....	1
Bituminous sands .....	4	.....	.....	3	.....	1
Miscellaneous .....	1	3	.....	.....	.....	4
Dredging .....	32	4	.....	32	.....	4
<b>TOTALS</b> .....	<b>19,635</b>	<b>6,804</b>	<b>138</b>	<b>19,367</b>	<b>222</b>	<b>6,988</b>

## ACREAGE CONTAINED IN ABOVE LEASES

Type of Lease	Active at date of transfer	Issued	Cancelled	Renewed	Active at March 31st, 1938
Petroleum and natural gas, provincial lands .....	2,263,076	991,970	2,250,651	15,896	988,499
Petroleum and natural gas, school lands .....	191,727	87,426	207,200	420	71,533
Petroleum and natural gas, crown reserve .....	6,160	22,561	28,721	.....	.....
Coal, provincial lands .....	236,984	107,057	162,107	71,964	109,970
Coal, school lands .....	9,570	2,300	5,179	1,464	5,227
Quarrying .....	1,675	522	697	.....	1,500
Quartz mining .....	182	.....	.....	.....	182
Salt and gypsum .....	200	6,721	200	.....	6,721
Bituminous sands .....	3,952	.....	3,643	.....	309
Miscellaneous .....	3,560	323	.....	.....	3,883
<b>TOTALS</b> .....	<b>2,717,086</b>	<b>1,218,880</b>	<b>2,658,398</b>	<b>89,744</b>	<b>1,187,824</b>
Dredging (in miles) .....	145	12	137	.....	20

## STATEMENT OF BUSINESS TRANSACTED, 1937-38

## PETROLEUM AND NATURAL GAS

	Number	Acres
Petroleum and natural gas leases issued on provincial lands .....	1,413	388,728.80
Petroleum and natural gas leases issued on school lands .....	210	30,345.60
Petroleum and natural gas leases cancelled and relinquished on provincial lands .....	704	103,815.81
Petroleum and natural gas leases cancelled and relinquished on school lands .....	84	8,492.83
Petroleum and natural gas leases cancelled under crown reserve regulations .....	14	15,280
Permits to prospect issued .....	29	588,437
Permits to prospect cancelled .....	59	1,037,462.78
Petroleum and natural gas reservations issued .....	8	221,691
Petroleum and natural gas reservations cancelled .....	1	45,168
Assignments registered .....	740	.....
Fees, rentals and bonus collected .....	\$320,199.14	.....
Royalties collected .....	273,524.10	.....
<b>Total</b> .....	<b>\$593,723.24</b>	.....

## COAL

	Number	Acres
Coal leases issued on provincial lands .....	29	4,852.50
Coal leases issued on school lands .....	3	658
Coal leases cancelled and relinquished on provincial lands .....	56	5,158.83
Coal leases cancelled and relinquished on school lands .....	2	348
Fees and rentals collected .....	\$119,808.71	.....
Royalties collected .....	173,386.26	.....
<b>Total</b> .....	<b>\$293,194.97</b>	.....



## MISCELLANEOUS

	Number	Authorize Removal of
Permits to collect bitumen .....	1	
Leases to extract glauber salts .....	2	
Domestic coal permits issued .....	34	888 tons
Quartz mining claims granted .....	1	
Quartz mining certificates of work issued .....	3	
Quartz mining certificates of partnership issued .....	Nil	
Powers of Attorney (quartz) registered .....	Nil	
Placer claims granted .....	4	
Powers of Attorney (placer) registered .....	Nil	
Bar-digging permits issued .....	Nil	
Sand, stone and gravel permits issued .....	21	9,310 cu. yds.

## PETROLEUM AND NATURAL GAS

*Development of Leases.*—Expenditures incurred in actual development of petroleum and natural gas rights acquired under lease, permit or reservation may, under the regulations, be accepted in satisfaction of rentals which should otherwise be paid in cash, and under this provision, rentals due the crown amounting to \$240,667.53 were satisfied by such expenditure and so reduced the revenue of the Division to that extent. The total rental revenue received in cash was \$320,199.14, which, added to the expenditure accepted in lieu of rental, makes a total of \$560,866.67 chargeable to fees and rentals.

*Disposal by Public Tender.*—The provision of the regulation for the disposal at auction of petroleum and natural gas rights in areas comprised in cancelled leases has resulted in payment to the crown of bonuses amounting to \$11,196.55 during the last fiscal year. Of this amount, \$11,151.45 was bid and paid on provincial land rights, and \$45.10 on school land rights.

*Number and Area of Leases.*—During the year 1,623 petroleum and natural gas leases were issued, comprising an area of 419,074.40 acres, of which 1,413, comprising 388,728.80 acres, represented rights on provincial lands and 210, comprising 30,345.60 acres, rights on school lands.

The province has issued since October 1st, 1930 a total of 6,439 leases, comprising 1,101,957 acres, and the Department of the Interior transferred to the province 18,868 leases comprising 2,460,962.48 acres.

Of this total 6,518 leases are now active comprising an area of 1,060,032 acres of which leases rights on provincial lands total 5,912, and those on school lands, 606, containing respectively 988,499 and 71,533 acres.

*Prospecting Permits.*—The regulations covering the issue of permits to prospect for petroleum and natural gas rights, the property of the crown, which were established by Order in Council, No. 671/31, were rescinded on the 7th of September, 1937, by Order in Council, No. 1027/37.

Under these regulations 29 permits, comprising 588,437 acres, were issued during the year and 59 permits, covering 1,037,463 acres, expired or were cancelled. The total issued while these regulations were in effect was 144 permits comprising 1,333,507 acres.

*Petroleum and Natural Gas Reservations.*—Regulations covering the reservation for geological examination of petroleum and natural gas rights, the property of the crown, were established by Order in Council, No. 1026, dated the 7th day of September, 1937.

Under the terms of these regulations, a reservation may be granted an applicant if he presents a satisfactory prospecting programme to be undertaken and provided that the information to be obtained will be of value to the Department. The minimum area which may be reserved in this manner is 10,000 acres, and the maximum area 50,000 acres. A charge of five cents an acre is made for a reservation of petroleum and natural gas rights for geological

examination. The period covered by the reservation is 45 days. During this period certain definite information must be furnished to the Department as to the employment of qualified personnel to complete the examination, and evidence of the financial ability of the applicant to undertake the work. If all these requirements are properly met, the reservation may be extended for a further 45 days to enable the applicant to proceed with actual field work.

Should the examination be of such a nature as to require a longer period to complete the work properly, the applicant under certain definite conditions, may obtain a further three months' extension to complete the investigation and to supply a full report with a record of work to the Department, together with logs of all test wells drilled. If the work and reports are found upon examination to be satisfactory, the applicant is privileged to lease the reserved area under the petroleum and natural gas regulations.

*Right of Entry.*—Regulations under Order in Council, No. 492/34, prescribing conditions under which the right of entry may be obtained upon land, were rescinded by Order in Council, No. 567/37, and new regulations have been established containing provisions for application for right of entry to be made to a judge of the judicial district in which the land is situated, instead of, as heretofore, before the Board of Public Utility Commissioners.

#### COAL

The history of the disposal of coal rights, the property of the crown is briefly as follows. Before the year 1887 coal rights were granted with the surface rights. Between 1887 and the year 1901 coal rights were sold outright at prices ranging from seven to ten dollars per acre, with twenty dollars as an upset price for anthracite deposits. Some parcels were sold by public auction. From April 6th, 1901 to March 4th, 1907 the practice of selling continued at the above prices but the sales were made subject to a royalty of ten cents per ton on the quantity of coal mined, which royalty was later reduced to seven cents per ton. Since March 4th, 1907, rights have been disposed of by terminable lease at a rental of one dollar per acre per annum and a royalty of five cents per ton.

During the fiscal year, coal mining leases were issued as follows:

	Number	Acres
Provincial lands' underrights .....	29	4,852.5
School lands' underrights .....	3	658

The number of coal leases active at the end of the year was 410, comprising 115,197 acres. The following quantity of coal, subject to crown royalty, was mined during the year:

On—		
Provincial lands' coal leases .....	2,336,437	tons
School lands' coal leases .....	300,118	"
Coal and mineral sales .....	590,842	"
Total .....	3,227,397	tons

This compares with 3,360,183 tons of similar coal, subject to royalty, mined last year.

New leases are granted only in cases of extension of existing operations or in the few instances where the locality in which the area applied for is so situated that it cannot be supplied economically from existing mines.

*Coal for Domestic Use.*—Permits to mine coal for domestic use are issued for a fee of \$1.00 together with a royalty of ten cents per ton. These permits terminate on the 31st day of March in each year and are limited to a maximum area of one acre.

The total number of permits for the year was 34. The amount of coal extracted under these permits for the year was 888 tons.

During the past 30 years, the following crown royalties have been collected from coal lands in the Province of Alberta:

Fiscal Year	Royalty Paid	Fiscal Year	Royalty Paid
1907-1908 .....	\$ 7,621.67	1924-1925 .....	148,979.10
1908-1909 .....	5,322.39	1925-1926 .....	188,277.94
1909-1910 .....	153,559.98	1926-1927 .....	218,150.10
1910-1911 .....	218,932.88	1927-1928 .....	231,757.96
1911-1912 .....	104,894.55	1928-1929 .....	254,616.27
1912-1913 .....	142,997.79	1929-1930 .....	248,083.71
1913-1914 .....	147,198.75	1930-1931 .....	105,126.51
1914-1915 .....	104,489.77	1931-1932 .....	145,170.33
1915-1916 .....	67,190.17	1932-1933 .....	143,800.01
1916-1917 .....	149,447.82	1933-1934 .....	193,527.82
1917-1918 .....	144,634.75	1934-1935 .....	176,122.43
1918-1919 .....	175,687.66	1935-1936 .....	186,691.23
1919-1920 .....	181,641.80	1936-1937 .....	193,810.33
1920-1921 .....	190,545.80	1937-38 .....	173,386.26
1921-1922 .....	185,436.88		
1922-1923 .....	171,723.83	Total .....	\$4,969,216.02
1923-1924 .....	210,389.53		

#### BITUMINOUS SANDS

There is still under reservation in the McMurray district an area of 15,000 square miles for the purpose of bituminous sand development. This area is of the greatest richness in bitumen and has the least overburden. There are two companies operating in the area under special development agreements and one company operating on a lease. The lease comprises 309 acres.

#### QUARTZ CLAIMS

The granting of quartz mining claims is subject to an annual expenditure for development work. With the establishment of satisfactory progress and the proper survey of the claim a lease is issued for a period of twenty-one years, the products recovered being subject to payment of royalty.

During the year one quartz mining claim was recorded. Four quartz mining leases comprising 181.8 acres are still active.

#### QUARRYING

Quarrying leases on crown lands are issued under the regulations for limestone, granite, slate, marble, gypsum, marl, gravel, sand, clay, volcanic ash or any building stone.

A total of 46 quarrying leases was active at the close of the year and these covered 1,500 acres.

#### SODIUM CHLORIDE (Common Salt)

As reported last year a lease for the extraction of sodium chloride was issued for a period of twenty-one years. This lease was issued following a permit to explore and prospect for salt in townships 88 and 89, ranges 8 and 9, west of the 4th meridian.

The permittee had conducted boring operations on legal subdivision 1 of section 10, township 89, range 9, west of the 4th meridian, and at a depth of 694 feet discovered a very high grade salt which continued to a depth of 893 feet, thereby disclosing a salt of a thickness of 199 feet. The permittee had expended a considerable amount of money on this work and for his discovery after a thorough investigation of the expenditure in actual drilling, he was granted drilling credit which was applied in part satisfaction of the first year's rental of the salt lease.

The lease comprises 6,720.82 acres and is subject to the regulations governing the disposal of salt rights. Under the terms of these regulations rental has to

be paid at the rate of fifty cents per acre for the first year and one dollar per acre for each subsequent year. Plant and machinery has to be installed within a year and certain definite quantities of salt must be produced, and a royalty of twenty cents a ton paid on all production.

The drilling of a production well on legal subdivision 2 of section 10, township 89, range 9, west of the 4th meridian, was started in January, 1937, and completed on November 11th, 1937 at a depth of 702 feet, salt having been encountered at 695 feet. Erection of a plant had been started in 1936 and was sufficiently completed by January, 1938 to make test runs of ordinary coarse salt for farmers use and certain coarse grades for packing plants.

Some experimentation and further construction will be necessary before the plant will be equipped to produce the finer grades of salt on a commercial basis. Several car-loads of lumber and concrete have been used in construction and a number of workmen employed in the establishing of what gives promise of becoming a new Alberta industry.

#### DREDGING

At the end of the year, four dredging leases were active. These leases comprised a twenty mile stretch of the McLeod River, but no dredging operations up to the close of the fiscal year had been conducted on them.

#### MISCELLANEOUS LEASES

Two special leases are in force which were issued for the removal and disposal of sodium sulphate (glauber salts), which occurs in a comparatively pure condition and in the form of a natural accumulation in certain sloughs and shallow lakes. Both leases were issued for a period of five years and comprise a total of 32.56 acres.

During the year there was extracted a total of 42 tons of glauber salts on which royalty was paid at the rate of 25 cents a ton.

#### SPECIAL PERMITS

There was in force during the year one special permit for the collecting of bitumen issued from a northern well, situated in the vicinity of Peace River. These rights were disposed of by public tender to the bidder offering the highest royalty. During the year a total of 437 gallons of bitumen was extracted.

In addition to the general work of the Division numerous letters were received requesting information on the province's natural resources. These required considerable investigation and a great deal of work. A number of copies of printed regulations and other material was despatched in answer to enquiries.

## Technical Division

### REPORT OF THE SUPERINTENDENT OF THE TECHNICAL DIVISION, T. W. DALKIN

*Notifications (Land Patents).*—During the fiscal year ending March 31st, 1938, 2,266 notifications were issued, covering a total area of 382,382.437 acres. These figures reveal the period under review as taking second place to the peak year of 1935-36 when 2,965 notifications were issued for a total area of 433,529.126 acres. Included in these are 56 notifications granting titles to 101 lots in government townsites and in other townsites where lots were transferred to the jurisdiction of this Department from the Department of Municipal Affairs through tax recovery proceedings.

Details of the notifications are as follows:

Nature of Grant	Notifications	Area (Acres)
Homesteads .....	1,462	228,067.381
Second homesteads .....	506	78,157.491
Sales (including lots in subdivisions) .....	105	2,120.087
School lands' sales .....	73	9,650.948
Special grants .....	51	52,701.885
Soldier grants .....	43	7,078.800
Exchange of lands .....	10	3,800.880
School lands' grants .....	10	31.035
Pre-emptions .....	3	481.000
Half-breed grants .....	1	160.000
Purchased homesteads .....	1	132.910
Northern Alberta Railway Company .....	1	0.020
<b>TOTALS .....</b>	<b>2,266</b>	<b>382,382.437</b>

Details of Sales in Subdivisions	Notifications	No. of Lots
Coleman .....	13	24
Peace River Landing Settlement .....	8	22
Canmore .....	7	7
Bellevue .....	5	5
Carbondale .....	2	2
Jarvie .....	3	3
Hillcrest .....	1	2
Tilley .....	1	1
Walsh .....	1	1
Maple Leaf ((7242 A1) .....	7	16
Maple Leaf (6224 Y) .....	5	11
Maple Leaf (6632 Y) .....	1	1
Maple Leaf (2107 A.A.) .....	1	5
McMurray Settlement (Plan 7518 A.K.), Portion, Block "X" .....	1	—
<b>TOTALS .....</b>	<b>56</b>	<b>101</b>

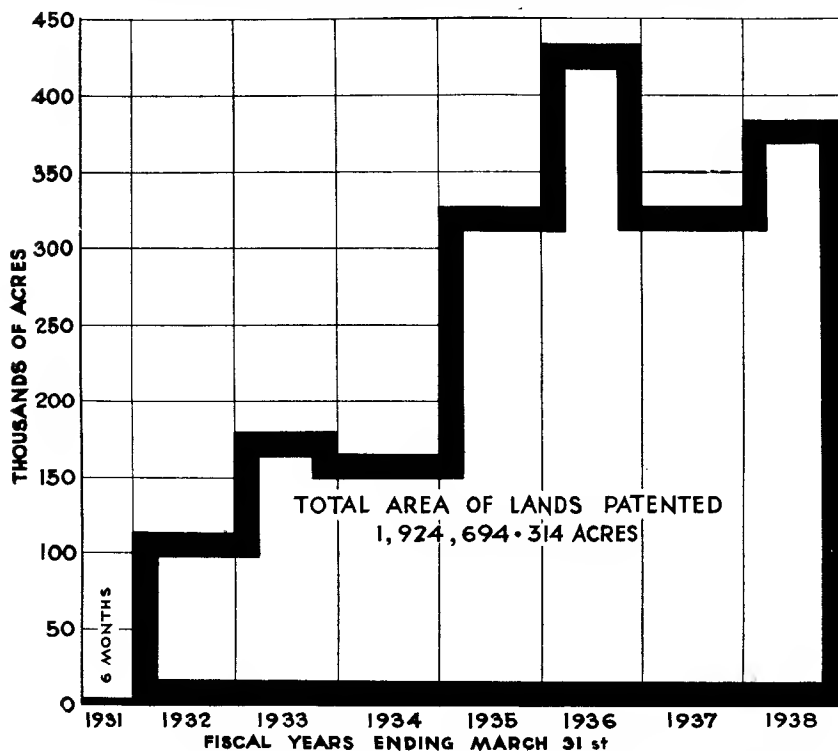
		Area
Exchange of mineral rights with the Mani- toba South Western Colonization Railway Company .....	1	310 acres

One of the special grants was issued in favour of the Dominion of Canada as represented by the Minister of Mines and Resources. Under clause 10 of the Agreement between the dominion and provincial governments, dated the 14th of December, 1929, relating to the transfer of the natural resources, the Superintendent-general of Indian Affairs made application for certain lands in order to fulfil the dominion's obligation to the Chipewyan Indians. An Order in Council, Number 1339/37 was accordingly passed on the 22nd day of November, 1937, which gave authority to set aside and vest title in the dominion government certain areas comprising 52,398.20 acres, excepting mines and minerals. Notification or land patent was issued on the 20th of December, 1937, covering these areas which extend at different intervals along the Athabaska River from township 102, northerly to the main reserve where the Athabaska River enters Lake

Athabaska, and are now dedicated as Indian Reserves, Numbers 201, 201A, 201B, 201C, 201D, 201E, 201F and 201G.

Since the transfer of the resources almost 2,000,000 acres of land have been patented and in this connection the graph included in this section of the Report will prove interesting.

**CHART SHOWING ACRES PATENTED  
FROM OCTOBER 1st 1930 TO MARCH 31st 1938**



*Homestead Entries.*—During the year, 1,479 homestead entries, 111 second homestead entries and 10 soldier grant entries were checked as to acreage and exceptions were made whenever necessary for railway rights of way, roadways, power transmission lines, pipe-lines and other previously alienated parcels of land. Where homesteads were affected by rivers the fordableness of same was checked before entries were granted to the land on both sides of the water.

*Lands Transferred from the Dominion to the Province.*—As a result of representation made from this Department to Ottawa, the following lands were transferred from dominion to provincial control:

(1) Privy Council Order, No. 239, dated the 31st of January, 1938, transferred all mines and minerals (precious and base) in those portions of the west half of section 26, in township 18, range 22, west of the 4th meridian, which lie to the west of the western limit of Lake McGregor Reservoir, containing 246.37 acres, more or less.

(2) Privy Council Order, No. 379, dated the 23rd day of February, 1938, transferred all the dominion interests remaining in River Lot 12, Peace River Landing Settlement, including all mines and minerals (precious and base).

(3) Privy Council Order, No. 218, dated the 10th of February, 1938, transferred the following lands, including mines and minerals (precious and base) to the province:

Firstly: Lots 1 to 26 in block 1, lots 1 to 31 in block 2, lots 1 to 28 in block 3, lots 1 to 25 in block 17, all inclusive, and the lanes in said blocks 1, 2, 3 and 17, respectively, and all the streets and avenues lying south-westerly of block 18 and the production north-westerly of the north-easterly limit of said block 18, all according to a plan of part of the City of Calgary, in the Province of Alberta, of record in the Land Titles Office for the South Alberta Land Registration District as "Calgary 6440 A.M." and  
Secondly: Villa lots 5, 6 and 7 in the north half of section 14, township 24, range 1, west of the 5th meridian, in the said province, as shown upon a plan of survey of villa lots at Calgary, approved and confirmed at Ottawa on the 21st of October, 1910, by Edouard Deville, Surveyor-general of Dominion Lands, and of record in the Department of Mines and Resources.

*Re-vested Soldier Settlement Board Lands.*—Only three parcels of land administered by the Government of Canada under The Soldier Settlement Act were transferred to the province for administration, in accordance with the following Privy Council Orders:

1. Privy Council Order, No. 2458, dated the 6th day of October, 1937, transferred the fractional north-east quarter of section 21, township 66, range 13, west of the 4th meridian.

2. Privy Council Order, No. 136, dated the 19th day of January, 1938, transferred the south half of section 2, township 84, range 25, west of the 5th meridian.

3. Privy Council Order, No. 617, dated the 28th day of March, 1938, transferred the south-east quarter of section 12, township 32, range 6, west of the 5th meridian.

*Roadways.*—Plans of surveyed roadways recorded in this Division numbered 143 and affected 485 parcels of open or alienated unpatented crown lands. In cases of alienated lands the usual quit claims were obtained and compensation exacted.

*Licences of Occupation.*—Amongst licences of occupation issued was one in favour of the Dominion of Canada for a wharf site, which is located on the shore of Round Lake, in legal subdivision 8 of section 32, township 77, range 19, west of the 5th meridian.

Three licences of occupation were also issued in favour of the Calgary Power Company for transmission lines in township 9, range 26, west of the 4th meridian, township 38, range 1, west of the 5th meridian and township 39, ranges 6 and 7, west of the 5th meridian.

There was considerable correspondence with the Canadian Utilities, Limited in connection with a transmission line right of way which this company had been operating over the crown lands since the first of October, 1930. This year a licence of occupation was issued in favour of the company, dating back to 1930.

The Canadian Pacific Railway Company made successful application for a licence of occupation for the purpose of erecting and maintaining railway bridges over the Bow River in the north-west of section 32, township 24, range 8, west of the 5th meridian, and over the Kananaskis River in the north-west of section 33, township 24, range 8, west of the 5th meridian.

A licence of occupation was granted to Alex McLeod of Conklin for a trail, 16½ feet in width, for the sole purpose of the licensee to transport fish from Winefred Lake at a point in township 75, range 5, west of the 4th meridian over available crown lands to Conklin in township 76, range 7, west of the 4th meridian.

An Order in Council, Number 69/38 was passed on the 18th of January, 1938, in order to grant J. Joseph Doyle a licence of occupation to build, construct, operate and maintain a road 66 feet in width over available surveyed

and unsurveyed crown lands from McMurray to the south shore of Lake Athabaska.

*Addition to Indian Reserves.*—An application was renewed by the Department of Indian Affairs for an addition of 514 acres to Janiver Indian Reserve, No. 194, in township 80, range 5, west of the 4th meridian, claiming that the complete area to which these Indians were entitled, under Treaty, was not laid out for them.

Another application was received for an addition to the Wabiskaw Indian Reserve located in township 79, range 25 and townships 79 and 80, range 26, all west of the 4th meridian. The application was made under the provisions of section 10 of the Agreement regarding the transfer of the natural resources by the dominion to provincial control. An official from Ottawa inspected the proposed addition and finally an area of 14,434.10 acres was selected and surveyed, exclusive of existing road allowances. This matter is still the subject of correspondence with Ottawa, and has not yet been transferred.

*New Surveys.*—The Department has had under consideration for some time the necessity for completing the survey of the boundary between Saskatchewan and Alberta, extending from the south shore of Lake Athabaska to the north boundary of the province. A Saskatchewan-Alberta Boundary Commission was formed and met in Ottawa during February. Arrangements were made whereby the governments of Canada, Saskatchewan and Alberta would each bear one-third of the cost of the survey. This survey was commenced in March and is proceeding. The survey subdividing the fractional townships 69 and 70, range 27, west of the 5th meridian was completed, but township 70, range 27, west of the 5th meridian, included in the same program, was only partially executed, due, it is understood, to the severity of the winter weather. Final plans of survey subdividing the west half of township 69, range 6, west of the 6th meridian, and parts of township 76 in ranges 12 and 13, west of the 6th meridian, were received from the Director of Surveys. Final survey plans of the subdivision of the lands, occupied by squatters at McLennan on the north-east quarter of section 29, township 77, range 19, west of the 5th meridian, were recorded in the Land Titles Office in order that notifications might issue to the purchasers of the lots.

The old survey of the row of sections adjoining the 5th meridian in township 48, range 28, west of the 4th meridian, was found to be in error, and a new survey was authorized and finally corrected plans were received. Final plans of smaller surveys were received from the Director of Surveys, affecting the north half of section 26, township 58, range 10, west of the 4th meridian, and the south-west quarter of section 7, township 46, range 5, west of the 5th meridian.

*Soil Surveys.*—An area of land known as the Coutts Quarantine Reserve in townships 1 and 2, range 15, and township 1, range 16, west of the 4th meridian, formerly held by the dominion government, was the subject of many enquiries, with the result that a soil survey of this area was made, in order that a decision could be arrived at as to the best method of its disposal or administration.

A scheme was advocated for the settlement of unemployed families on relief in Calgary. An area located in townships 51 and 52, range 12 west of the 5th meridian was selected, and a soil survey made as to its possibilities, but no definite action appears to have been taken in the way of settlement.

*New Geological Map.*—The new geological map, scale 16 miles to the inch, referred to in last year's annual report, was completed and 4,000 copies were printed. The demand for this map must have been very gratifying to Dr. J. A. Allan of the Department of Geology of the University of Alberta. Applications



for copies of this map have been received from all over Canada and the United States, as well as from the British Isles. As far as Alberta is concerned, the demand from educational authorities alone seems to have justified its publication.

*Calgary and Lethbridge Agency Map, Scale 12½ Miles to the Inch.*—A re-issue of this map was published, and 5,000 copies were printed.

*General.*—At the beginning of this year four draftsmen were still assigned to cope with the records, due to activity in the Turner Valley and other oil fields of the province. Apart from the general drafting to take care of requirements of the various divisions of this Department, contact and co-operation were maintained with the other departments of the government. In this regard it may be mentioned that plans, charts and reports were prepared of data for submission to Ottawa on the Provincial-Dominion Relations.

A beginning was made of the new set of plan records showing the disposition of each township in the province. On account of the magnitude of this job, it will take some years to complete. Such records, however, will be of immense value to the Department and it will then be possible at a glance to ascertain the disposition of any land in the province which may be the subject of enquiry, with its relationship to adjoining lands.

Plans were prepared of a number of areas in order to give consideration to the advisability of making them available for settlement. These plans showed the land classification, where this information was available from the Division's records, and also the disposition of the occupied lands. Many plans of large areas which showed the extent of grazing leases, were made for inspectors.

This Division carries a varied stock of maps, and it has been encouraging to watch the steady and increased interest in the many publications which are available for distribution. Mail enquiries are received from many countries and tourists call from points as far distant as Mexico. Maps for hunting trips, prospecting purposes and other usages are included in the many and different requirements which are continuously being supplied by this Division.

## Petroleum and Natural Gas

### REPORT OF THE DIRECTOR OF PETROLEUM AND NATURAL GAS, C. W. DINGMAN

During the fiscal year 1937-38 Alberta passed from an importer of oil to an exporter. Taking figures for the calendar year, it was found that for 1937 there had been a demand for oil in the province of some 2,625,000 barrels, including refining and handling losses, or about ten per cent above 1936, and a production of nearly 2,800,000 barrels, but with the rate of production increasing, so that the December rate, if continued for the full year would have yielded 4,650,000 barrels or about 2,000,000 barrels more than the requirements of the province.

The completion of several large producers made it necessary in September for the purchasers of oil to prorate their takings, owing to limited pipe-line facilities from Turner Valley to Calgary. The question of markets within economic distance of the field was also a factor. Much of the imports had been coming from Cut Bank field in Montana and some contracts for Montana oil ran to the end of 1937. The general policy of the purchasers appears to have been to run the existing pipe-lines to capacity and purchase proportional amounts of oil from all wells offering it for sale up to the pipe-line capacity. Vapour phase wells and absorption plants, yielding a comparatively small fraction of the total, were not restricted. Immediate steps were taken to increase the pipe-line capacity by the construction of an additional 6 inch line. When partly completed a portion of this pipe was put into service which increased the quantity that could be pumped. At the end of March construction was continuing and it was expected that the 6 inch line would be ready for use in May.

A list of wells completed follows. Where thirteen wells were completed in the previous fiscal year, only six of which were moderate to large producers of crude, the current year saw thirty-one wells completed, of which twenty-eight were moderate to large crude producers. All of these were in the south end of the field except one. The exception, Royalite No. 29, is at the extreme north end, and it points the way to good probability of a valuable pool in that locality, and extends the area of known crude reserves first found by Model, No. 1.

Failure to establish commercial production in Dalhousie, No. 8 and Brown, No. 3 was disappointing. The lengthy performance of Advance, No. 5A, almost midway between them, still gives hope, however, for further production in that area. Performance of Albertan Federated, when tested in June 1937, suggests that crude production may yet be found on the west flank of the oldest part of the field in sections 1 and 12, township 20, range 3, west of the 5th meridian.

## TURNER VALLEY COMPLETIONS,

arranged by date of completion during the fiscal year (west of the 5th meridian)

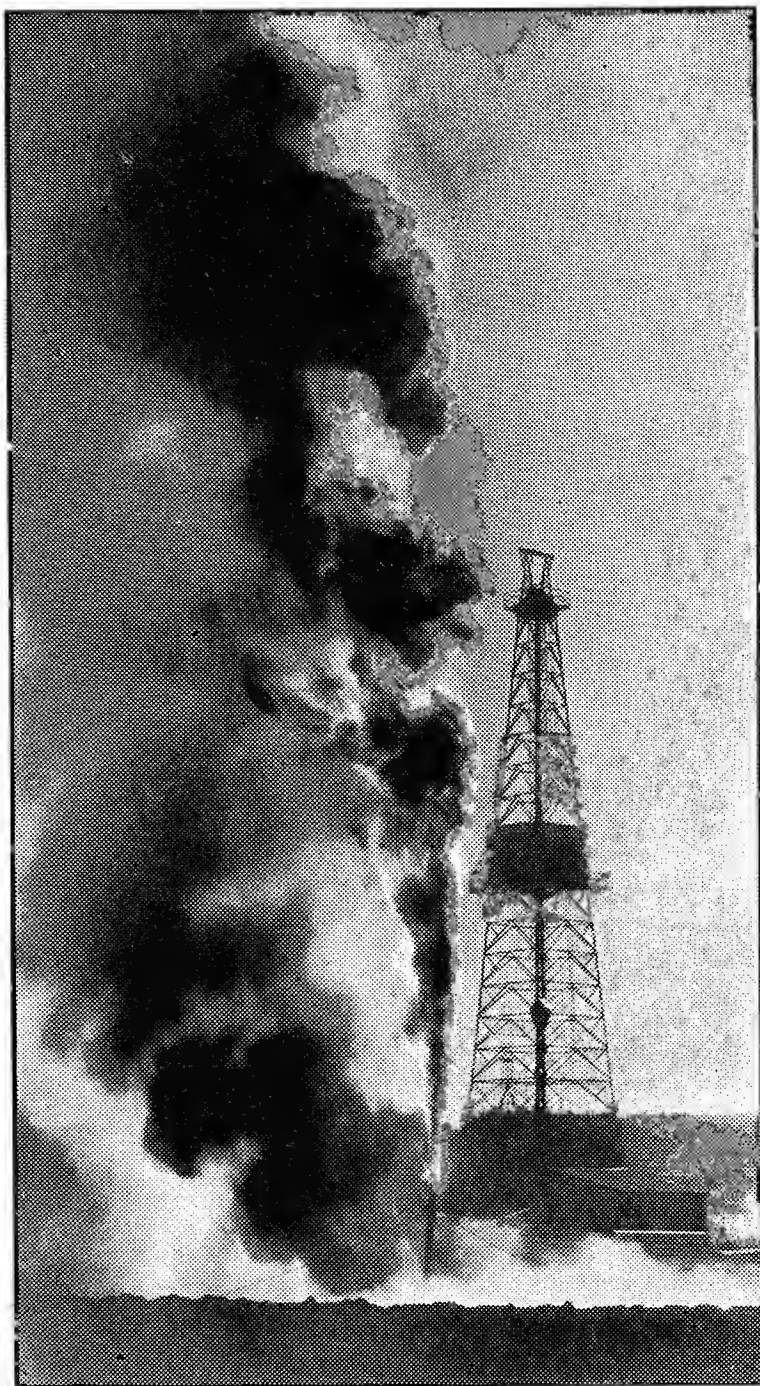
Well	Location	Depth	Date	Produces
Sterling Pacific, No. 4.....	*4 of 33, 18-2 (Inadvertently omitted from last year's report)	7,184'	Mar. 17, 1937.....	Crude, small gas,
Monarch, No. 1.....	9 of 20, 18-2	7,007'	July 19, 1937.....	Crude, small gas,
Sterling Pacific, No. 5.....	12 of 33, 18-2	7,063'	July 31, 1937.....	Crude, small gas,
Richland, No. 3.....	14 of 28, 18-2	6,075'	Aug. 20, 1937.....	Crude, large gas,
Davies, No. 2.....	13 of 21, 18-2	6,985'	Sept. 7, 1937.....	Crude, small gas,
Brown, No. 1.....	14 of 16, 18-2	6,817'	Sept. 13, 1937.....	Crude, small gas,
Mercury, No. 8.....	3 of 4, 19-2	6,023'	Sept. 23, 1937.....	Small, vapour phase,
Brown, No. 2.....	8 of 20, 18-2	6,997'	Sept. 25, 1937.....	Crude, small gas,
Granville, No. 1.....	16 of 19, 18-2	7,318'	Sept. 30, 1937.....	Crude, small gas,
Share, No. 1.....	8 of 29, 18-2	7,170'	Sept. 30, 1937.....	Crude, small gas,
Model Spooner, No. 1.....	4 of 28, 18-2	6,942'	Oct. 1, 1937.....	Crude, medium gas,
Four Star, No. 1.....	13 of 28, 18-2	7,070'	Oct. 11, 1937.....	Crude, small gas,
Royal Crest, No. 1.....	9 of 32, 18-2	7,114'	Oct. 20, 1937.....	Crude, small gas,
Prairie, No. 1.....	16 of 17, 18-2	7,315'	Oct. 21, 1937.....	Crude, small gas,
Commoil, No. 1.....	15 of 29, 18-2	7,475'	Oct. 23, 1937.....	Crude, small gas,
Three Point, No. 1.....	12 of 28, 18-2	6,963'	Oct. 29, 1937.....	Crude, small gas,
Firestone, No. 1.....	13 of 16, 18-2	6,917'	Nov. 2, 1937.....	Crude, small gas,
Sterling Pacific, No. 6.....	5 of 33, 18-2	7,117'	Nov. 14, 1937.....	Crude, small gas,
Westflank, No. 1.....	1 of 32, 18-2	7,150'	Nov. 19, 1937.....	Crude, small gas,
National, No. 1.....	8 of 29, 18-2	7,220'	Dec. 6, 1937.....	Crude, small gas,
Royal Canadian, No. 1.....	15 of 20, 18-2	7,416'	Dec. 11, 1937.....	Crude, small gas,
Sunset, No. 1.....	10 of 20, 18-2	7,475'	Dec. 20, 1937.....	Crude, small gas,
Westflank, No. 3.....	8 of 32, 18-2	6,888'	Dec. 20, 1937.....	Crude, small gas,
Westflank, No. 2.....	8 of 32, 18-2	6,973'	Jan. 10, 1938.....	Crude, small gas,
Brown, No. 3.....	1 of 19, 19-2	6,777'	Jan. 14, 1938.....	Not commercial,
Home-Millarville, No. 1.....	8 of 33, 20-3	7,600'	Feb. 2, 1938.....	Abandoned, crooked,
Spyhill, No. 1.....	16 of 20, 18-2	7,058'	Feb. 14, 1938.....	Crude, small gas,
Royalite, No. 28.....	16 of 32, 18-2	6,949'	Feb. 18, 1938.....	Crude, small gas,
Royalite, No. 29.....	2 of 27, 20-3	6,920'	Mar. 17, 1938.....	Crude, small gas,
Davies, No. 1.....	2 of 29, 18-2	7,373'	Mar. 19, 1938.....	Crude, small gas,
Richland, No. 2.....	5 of 28, 18-2	6,950'	Mar. 24, 1938.....	Crude, large gas,
Sunburst, No. 1.....	1 of 29, 18-2	7,157'	Mar. 24, 1938.....	Crude, small gas.

\*Note:—Legal sub-division 4 of section 33, township 18, range 2.

Continued waste of gas from the older part of the field with very small financial return from the gas drawn has threatened the possibilities of full ultimate recovery of crude from the west flank. This serious threat together with the desirability of having a disinterested authority appointed as umpire in the proration of oil purchases led to the passage of an act for conservation of gas and oil resources in the province. This act, at the close of the period under review, had not been proclaimed pending the enactment of enabling legislation by the parliament of Canada, but when proclaimed it will give wide powers to a board the appointment of which is provided for in such act.

Tests of vapour phase wells were made in June, 1937, following the practice of former years. In section 20, township 19, range 2, west of the 5th meridian, where pressures were lowest in 1936, the withdrawals of gas had been moderate during the year and the pressure drop was of the order of 20 or 30 pounds for the year, with remaining pressure as observed at the surface of as low as 362 pounds. At the south end, where the large development of the year has been concentrated, drops occurred of 220 to 340 pounds for the year, with remaining closed pressure ranging from 700 to 1,130 pounds. At the far north end of the field the maximum 1937 pressure was 930 pounds, and drops of 220 to 225 pounds were noted for the elapsed year.

Some pioneer research work was done by the Royalite Oil Company, which purchased equipment for observing bottom hole pressure and temperature and made a number of tests. Bottom hole pressure observations are quite essential when there is liquid in the hole as well as gas, because the amount of liquid in the hole cannot be observed at the surface and it greatly affects the surface pressure observation. The highest bottom hole pressure reported was observed at the end of February, 1938 as 2,225 pounds per square inch. The well had been producing crude oil for over four months, and the initial bottom hole pressure was consequently somewhat higher. The bottom hole temperature was 150°F., and was somewhat higher than previous estimates had set for probable



A typical Turner Valley crude oil well coming into production

temperature. The depth of the instrument at which this pressure and temperature were observed was 7,175 feet, and surface pressure was 1,235 pounds. Some 650 pounds out of the total of 2,225 must have been due to oil standing in the hole. The temperature at the bottom is of particular interest in studies of gas reserves, since the pressure of a given mass of gas in a container of fixed capacity depends on the temperature. Perusal of temperatures observed at the bottom of various holes suggests that the temperature drops as gas is withdrawn.

Following the action of purchasers in prorating large wells, the Division was asked to test wells for potential production. In December and January a set of tests was made. At this time the procedure was to allow each well to flow at its maximum capacity for five days and take the potential on the basis of the last day's production. The information gained by this method showed that so long a test at maximum capacity was unnecessary and undesirable, and that equally valuable information would be obtained by one day's maximum flow after the well had been operated at its prorated quota regularly for ten days. The wells in all cases decreased in flow from the first to the fifth days of unrestricted flow, and it was agreed by all concerned that two-thirds of the production obtained on the first day of unrestricted flow would be a fair figure to use for potential. It was planned to use this procedure in succeeding potential tests.

#### DRILLING ACTIVITY OUTSIDE TURNER VALLEY

New Valley, No. 1, just east of the north end of Turner Valley, drilled to 8,450 feet with standard tools. Operations were suspended during the winter months.

Sentinel, No. 1 is reported to have resumed operations after some lapse of time.

Green Valley, formerly known as Banner, No. 1, drilled to 5,794 feet, finding the Madison limestone with a little water and showings of oil. Preparations were being made to run casing as soon as a fishing job was completed, and make a test for oil production at somewhat greater depth.

Moose Oils, No. 2 well was completed at a depth of 1,553 feet and produced a small amount of 47° gravity oil, but had not been produced regularly up to the end of March, 1938.

Model Oils and Canyon Oils started a joint test near Moose, No. 2, but were suspended at shallow depth.

Elbow, No. 1 reached a depth of 5,582 feet.

Roxana, No. 1, just south of the Stony Indian Reserve, reached a depth of about 3,790 feet and suspended operations during the winter.

Southend Petroleums conducted operations in the old Imperial Highwood, No. 1, carrying the depth to 5,285 feet by diamond drill before abandoning.

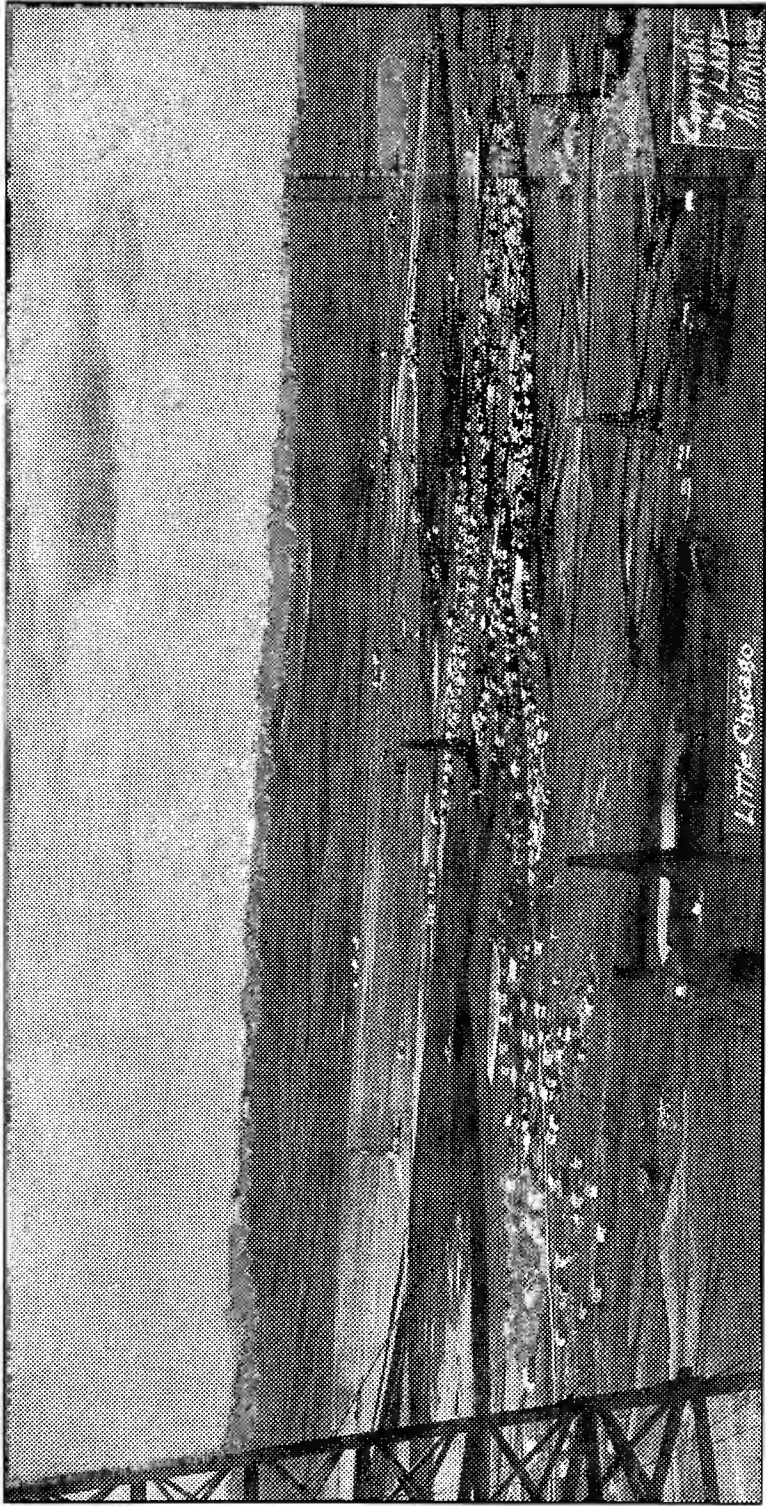
Spindletop drilled to 2,315 feet and shut down for the winter.

Hunter Valley, No. 1, in the foothills west of Olds, drilled to 8,282 feet and abandoned the hole.

Home Oils (Alberta) Ltd. started a test in the Brazeau area, on the east side of Chungo Creek in legal subdivision 16 of section 7, township 43, range 17, west of the 5th meridian, and attained a depth of 2,712 feet by the end of March, 1938. Careful geological study and aerial photos of a large area preceded the location of this interesting test.

Marjon drilled to 5,530 feet in their test north of Lundbreck.

Maxmont, in the vicinity of this well, drilled to 6,678 feet, making quite a record for standard tools of over 3,800 feet of open hole.



Little Chicago, a growing townsite in southern Turner Valley

Weymarn-Pincher Creek, No. 2 was carried to a depth of 6,420 feet in operations sponsored by the Anglo-Canadian Company.

Franco, drilling near Cardston, did a little work before suspending operations.

Lyons-McIntyre in legal subdivision 14 of section 19, township 3, range 21, west of the 4th meridian, was drilled to 3,100 feet with operations continuing.

Near Taber, Plains Petroleum abandoned their No. 1 well at a depth of 3,310 feet; drilled their No. 2 well to a depth of 3,222 feet, completing it as a fair producer of crude of about 27° gravity. Their No. 3 well was drilled to 3,435 feet without obtaining production, and two further wells are projected for the season.

Border Petroleum have made a proposal to deepen the Canadian Western Natural Gas Company's No. 6 Barnwell for a test of the Taber sand.

Lethbridge Petroleum and Refining, No. 1 was drilled to 2,215 feet in legal subdivision 12 of section 11, township 8, range 22, west of the 4th meridian.

Range, No. 3 was started not far from Range, No. 1 (Rogers Imperial) and suspended at 1,765 feet.

Home Oils (Alberta) drilled No. 1 Coutts to 3,150 feet and abandoned. This test looked for a westerly extension of the Red Coulee field.

Anaconda started an interesting test near Steveville, drilled to 1,120 feet and shut down for the winter.

Echlin Carbon Black Company drilled a well to 418 feet in the district north of Delia, obtaining a little gas.

In the area from Wainwright east to the Saskatchewan border and north to the North Saskatchewan river, Montreal Alberta, No. 1 did some testing and drilled a little deeper, depth at the end of March, 1938 being 3,497 feet.

London Ribstone, No. 2 well was redrilled and carried to a depth of 2,189 feet. A test of an oil sand at that depth showed only a small amount of heavy oil.

Blackfoot Ribstone, No. 1 was preparing to drill near the town of Ribstone.

Battleview Oils (Sam Taylor, No. 1) was drilled to 1,893 feet in legal subdivision 13 of section 32, township 47, range 5, west of the 4th meridian, obtaining a large flow of gas in a thick sand at the Benton/Lower Cretaceous contact.

Pacalta drilled its Battleview, No. 1 in legal subdivision 3 of section 5, township 48, range 5, west of the 4th meridian (about a half-mile east of the Sam Taylor well) and at the end of March, 1938 was coring and testing sands in the Lower Cretaceous.

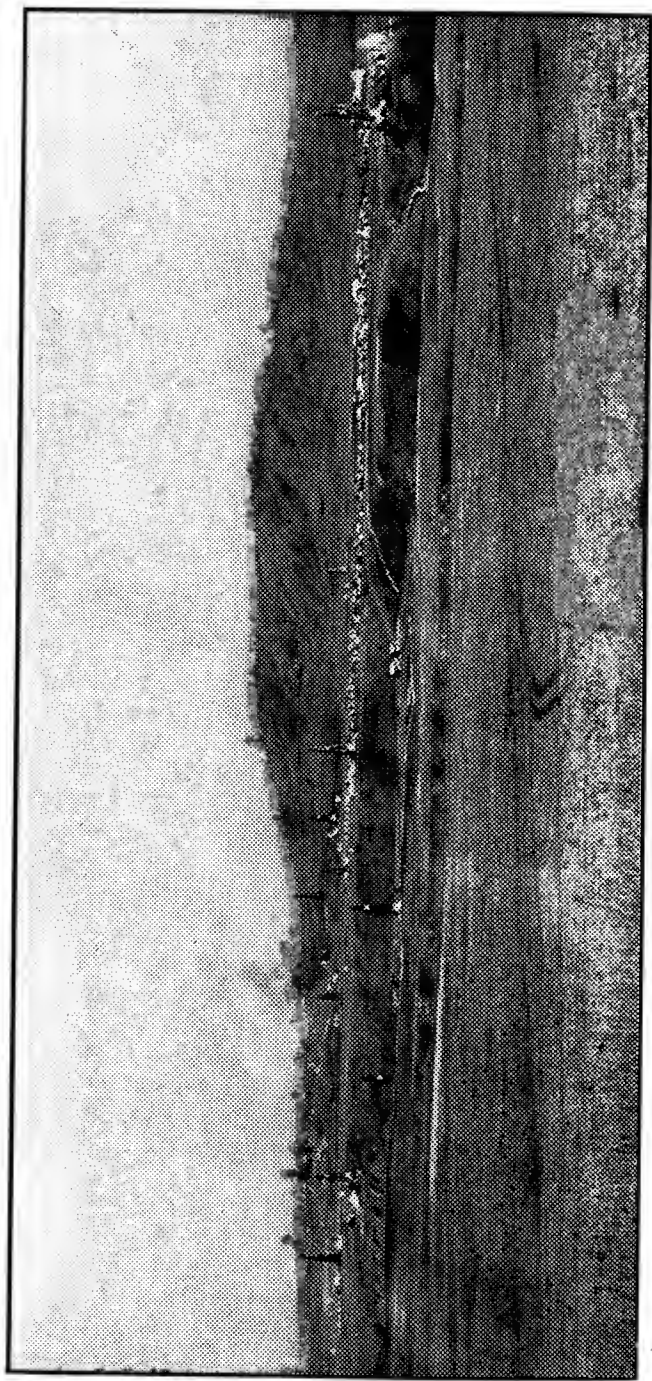
Altoba drilled its No. 2 Wainwright well in legal subdivision 1 of section 35, township 47, range 7, west of the 4th meridian, to a depth of 2,311 feet and at the end of March, 1938 was testing sands in the Lower Cretaceous.

Waintown Gas and Oil Company erected a rig in legal subdivision 16 of section 26, township 50, range 7, west of the 4th meridian, about 2½ miles west of the town of Vermilion, and was preparing to drill for gas.

Dina Oil Company redrilled the former Meridian, No. 2 to 1,811 feet and started production operations, topping the oil in a small refinery at the well. Their No. 4 well was drilled to 1,710 feet where it encountered the same oil sand.

Near Pouce Coupe, the Batcheller syndicate was drilling a deep diamond-drill test, and reached a depth of 782 feet at the end of March, 1938.





Little New York, another of the Valley's townships, situated a mile and a half south of Little Chicago





Turner Valley townsite in centre of the valley

At Waterways a well was drilled to the salt beds and commercial production of salt started late in 1937.

Manuscript has been prepared for publication of a Schedule of Wells in Alberta and it is hoped that the material will be published in 1938.

#### GAS FIELDS

Closed pressure in the Viking field averaged 553 pounds in the fall of 1937. Repressuring of Bow Island field continued, the pressure by the end of March, 1938 being 545 pounds, with a total injection since September, 1930 of 11,971,383 Mcf.

No developments in other gas fields are of sufficient importance to record save for the discovery of gas in the Battleview well above mentioned. Gas from this well was used as fuel in drilling Pacalta-Battleview, No. 1. A closed pressure of 550 pounds was reported at this well on completion, but the gauges were not tested for comparison with a standard.

#### BITUMINOUS SANDS

It was reported in the previous annual report that a plant had been erected near McMurray for separation of sand from bitumen. During the year work was started on the erection of a complete refinery to process the oil. The capacity of the plant for separating sand was increased, and additional equipment installed for mining. At the end of the period the plant was about three-quarters complete.

#### OIL PRODUCTION FOR THE FISCAL YEAR 1937-38

	Barrels	Value Estimated
Turner Valley Limestone, naphtha .....	145,329	\$ 319,519.40
Turner Valley Limestone, crude .....	2,838,811	4,030,703.26
Turner Valley Limestone, natural gasoline....	651,870	1,404,790.43
Turner Valley, shallow crude .....	10,332	15,545.49
Red Coulee, light crude .....	14,101	15,124.28
Wainwright, heavy crude .....	14,101	11,122.83
Miscellaneous .....	5,555	3,735.20
<b>TOTALS.....</b>	<b>3,680,099</b>	<b>\$5,800,540.89</b>

As previously stated there was no sharp division in classification between the first two items above with the result that arbitrary assumptions became necessary.

Prior to the end of 1937 complete values of production were not supplied to the Department and it was necessary to make numerous estimations which were applied to gross production figures. Subsequent to that date complete values of sales were supplied. The valuations given above are reached by additions of figures which are obviously not exactly comparable and average values per barrel of the various items should be accepted with a little caution.

The quantity "barrel" consists of 35 imperial gallons and is the same as the United States barrel of 42 U.S. gallons.

#### SUMMARY OF OIL PRODUCTION IN ALBERTA

	By Fiscal Years					Total Barrels
	Turner Limestone	Valley Shallow	Red Coulee	Wain- wright	Miscel- laneous	
1914-36 .....	9,194,390	420,882	232,521	86,892	23,372	9,958,057
1936-37 .....	1,403,611	11,909	16,386	15,155	600	1,447,661
1937-38 .....	3,636,010	10,332	14,101	14,101	5,555	3,680,099
<b>TOTALS .....</b>	<b>14,234,011</b>	<b>443,123</b>	<b>263,008</b>	<b>116,148</b>	<b>29,527</b>	<b>15,085,817</b>

SUMMARY OF OIL PRODUCTION IN ALBERTA

	By Calendar Years					Total Barrels
	Turner Limestone	Valley Shallow	Red Coulee	Wainwright	Miscellaneous	
1914-35 .....	8,902,734	417,086	227,770	84,300	23,062	9,654,952
1936 .....	1,274,119	13,119	17,937	14,957	310	1,320,442
1937 .....	2,756,632	10,589	13,790	13,559	2,338	2,796,908
1938 (3 months) .....	1,300,526	2,329	3,511	3,332	3,817	1,313,515
TOTALS .....	14,234,011	443,123	263,008	116,148	29,527	15,085,817

OIL PRODUCING WELLS IN THE PROVINCE

As at March 31st, 1938

	Producing	Closed in	Total
Turner Valley, oil and gas .....	109	29	138
Turner Valley, light crude only .....	5	—	5
Red Coulee .....	7	—	7
Wainwright .....	6	3	9
Miscellaneous .....	2	1	3
TOTALS .....	129	33	162

GAS WELLS NOT INCLUDED WITH OIL WELLS

Medicine Hat—Redcliff .....	46
Bow Island .....	11
Foremost .....	6
Milk River area .....	3
Viking .....	23
Kinsella .....	3
Battleview .....	1
Fabyan .....	2
Brooks .....	6
TOTAL .....	101

Numerous wells which serve only a single consumer are not included.

FOOTAGE DRILLED DURING YEAR

During the fiscal year the following footage was drilled:

Fiscal year 1937-38	Turner Valley	Foothills West of Turner Valley	Rest of Province	Total
Apr.-June .....	83,746	2,977	8,693	95,416
July-Sept. ....	90,312	3,195	16,709	110,216
Oct.-Dec. ....	48,467	2,053	9,395	59,915
Jan.-Mar. ....	85,869	1,269	7,401	94,539
TOTALS .....	308,394	9,494	42,198	360,086

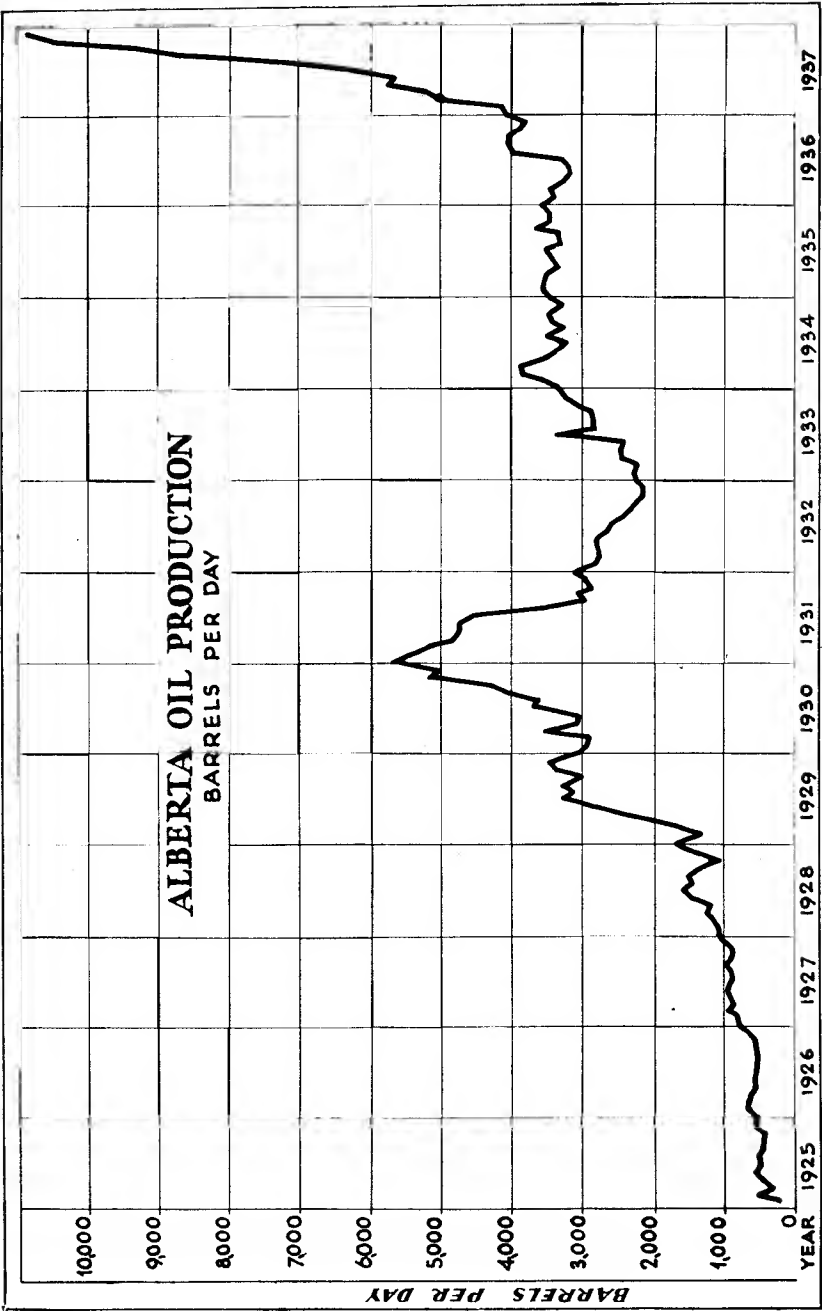
COMPARATIVE STATEMENT OF FOOTAGE DRILLED IN WELLS

Fiscal Year	Turner Valley	Foothills West of Turner Valley	Rest of Province	Total
1930-31 .....	112,043	14,373	88,544	214,960
1931-32 .....	37,695	2,173	36,505	76,373
1932-33 .....	13,812	813	21,495	36,120
1933-34 .....	65,773	2,417	14,183	82,373
1934-35 .....	70,555	4,850	15,163	90,568
1935-36 .....	24,383	6,120	25,999	56,502
1936-37 .....	70,275	8,682	38,048	117,005
1937-38 .....	308,394	9,494	42,198	360,086
TOTALS .....	702,930	48,922	282,135	1,033,987
Increases this year in comparison with last .....	238,119	812	4,150	243,081

It will be noted that the increased activity was centred in Turner Valley and that in this area nearly  $4\frac{1}{2}$  times as much footage was made as in the previous year.

GAS USED IN ALBERTA 1937-38		
Quantities in Mcf (Thousands of Cubic Feet)		
From Foremost .....		Nil
From Turner Valley:		
Calgary-Lethbridge .....	6,415,030	
Refinery .....	1,144,509	
Stored and compressor fuel, Bow Island repressuring .....	1,509,555	
Bow Island town .....	50,700	
Field use (mostly estimated) .....	13,424,282	
Brooks .....		22,544,076
Edmonton and towns .....		49,533
Wainwright town .....	104,044	3,294,400
Wainwright field use (estimated) .....	27,600	
Medicine Hat .....		131,644
Redcliff .....		2,071,123
Exported to Montana (includes some gas for field use in Montana) .....		698,314
Red Coulee, field use in Alberta .....		395,723
Miscellaneous, field use .....		7,854
		19,600
TOTAL .....		29,212,267

ESTIMATE OF WITHDRAWALS AND WASTE OF GAS FROM TURNER VALLEY		
	Mcf. Drawn	Mcf. Wasted
To end of March, 1935 .....	717,110,000	614,050,000
1935-36 .....	90,250,000	78,020,000
1936-37 .....	87,000,000	74,710,000
1937-38 .....	82,119,000	59,566,000
TOTALS .....	976,479,000	826,346,000



## Forestry

### REPORT OF THE DIRECTOR OF FORESTRY, T. F. BLEFGEN

The fiscal year 1937-38 shows a satisfactory state of affairs with respect to the extent of timber operations and departmental revenue if considered in connection with prevailing general conditions throughout the country. Due to an augmented demand from the United States and eastern Canada for lumber and a slight improvement in market price, Alberta operators stepped up production. The improvement in market prices for lumber was not maintained and likewise the demand for forest products fell off with the result that supply yards became overstocked.

In looking beyond revenue interest for the Department and examining the situation with respect to the probable demands for a supply of lumber, it would appear that the immediate future does not hold a great promise of improvement, either in the matter of an advance in market price or an increase in the absorption power of the market.

The demand for railway ties held up very well during the year and, while a reduction in the manufacture of this product of approximately 15% is recorded, the price per tie remained steady. It may be anticipated that the demand for railway ties for maintenance purposes will become stabilized and the demand will eventually decrease to some extent due to the widespread use of creosote-treated ties and the fact that new railway construction is at a standstill.



A northern Alberta logging camp

Last year it was pointed out that the free timber allowance, which is granted in conjunction with homestead entry, was of questionable value. This view is still held but, in addition, it should be remarked that the almost continual demands for concessions in the way of large reductions in timber dues or the entire elimination of timber dues from persons who, by the good fortune of location, would be the only persons in a position to take advantage of any such reduction is not in the interest of the province at large.

Year after year the need of a greater measure of forest protection has been emphasized. This has been stressed because in many directions the forest resource is important, whether it be accessible timber of merchantable size or

whether it is potentially accessible and merchantable, or whether it is a ground cover of forest growth in remote regions. This importance is not debatable though, of course, the relative importance of various blocks of timber may be a point to consider. To realize what has happened and is continuing to happen with the passing of each fire season, it is only necessary to point out that from the season of 1931 to the conclusion of the 1937 season, it is known that 2,249 forest fires burnt over an area in excess of 1,939,661 acres, of which 1,404,859 acres carried tree growth. This latter area supporting tree growth, if in a solid block, would measure approximately 50 miles in length by 44 miles in width.

In the Annual Report covering last year's operations, it was pointed out that some of the most serious fire hazards had arisen in and adjacent to forested areas which are subject to the highest form of protection prevalent in Alberta and that, due to this coincidence, the Forest Service was in a better position to deal with the problem than had the hazard occurred in areas where organization is most elementary. The danger of such an occurrence was forecast. While the situation, with regard to which grave fears were expressed, did develop this year, in that divisions of the Northern Alberta Forest District became seriously involved, it is not with any degree of satisfaction that it is announced that the forecast became a fact. Rather is it referred to in order that the pointedness of former reports may be emphasized. There is only one remedy for a problem which to a large extent is created by the effort to change and develop lands from their wild state into lands producing agricultural crops.

Early in the fiscal year a decision of far-reaching consequence to members of the Forest Service was made in that the administration of the Game Branch was placed under the Department of Agriculture. This concluded an arrangement that had held great promise for the future and severed the direct connection between two complementary phases of administrative work. It is interesting to note here that during the year under review the officers of the Forest Service continued to spend a considerable amount of time in the interest of game administration.

The work of the staff of the Forest Service again calls for comment. In field and in office the work has been dealt with systematically, satisfactorily and as expeditiously as is humanly possible. Fire emergency naturally calls for abnormal and exhausting efforts entailing no little self-sacrifice. This necessity is pronounced under the existing provisions for field coverage and equipment supply.

The forest nursery operation at Oliver continues to be an important phase of the work carried on by the Forest Service. While the output of tree stock is small if compared with other government operated nurseries in Canada, the stock annually distributed is of sufficient quantity to be of a definite value to individuals and to government institutions.

In addition to providing a limited amount of tree stock for distribution, the nursery presents an opportunity for experimentation. This opportunity is being utilized to the extent possible in connection with the trial of species foreign to Alberta.

#### FOREST PROTECTION

The protection of the forests of this province should be a more positive matter than that which now exists. The protection staff rather than being expanded has been decreased during the past several years when, in reality, the hazard from various forms of human activity has increased steadily. This combination of reducing the possibility of prevention and control in the face of a mounting hazard can only result in more fires, larger fires, unchecked fires and the further destruction of large tracts of valuable forest cover. The remedy lies in the



direction of fire prevention. Under existing arrangements and circumstances, every spring, summer and fall season is potentially a serious fire season and it only remains for ensuing conditions to determine the fire situation.



Forest fire in vicinity of Antross, May 1937

*Fire Season.*—During the winter of 1936-37 only a normal snowfall occurred, in fact, in many sections the snowfall was light. A fairly early spring season accompanied by an almost complete lack of moisture accounts for early hazardous fire conditions and explains the early fire-fighting operations. From late April until early September there was no let up of hazardous conditions in the province though there was a shift of hazard. Thus the early hazard concerned the Edmonton and Edson divisions of the Northern Alberta Forest District and the Clearwater Forest, a division of the Rocky Mountains Forest Reserve. In late June the Grande Prairie, Peace River, Lesser Slave, and McMurray divisions of the Northern Alberta Forest District became seriously involved while those divisions formerly concerned were relieved by general rains. Midsummer and early fall were accompanied by extremely dry weather conditions across the northern part of the province as well as along the mountain and foothill region and over the Cypress Hills Forest Reserve. The fire season closed later than usual and necessitated prolonging the seasonal employment of several members of the field staff.

*Fire Prevention.*—The possibilities of prevention are exploited to the extent that staff strength and the period of seasonal employment permits. It is in this direction that any large improvement is possible though little headway can be



made in the face of an increasing fire hazard and an almost annual decrease of the field staff strength. The benefits to be derived from more adequate prevention are so apparent as to make detailed discussion unnecessary. Briefly, a step in this direction would necessitate an increase of operating costs but would undoubtedly result in a decrease of fire-fighting expenditures and loss of timber through fire.

## BURNING PERMITS ISSUED, PROVINCE OF ALBERTA, 1937

By the Forest Service:		
Cypress Hills .....	23	
Crowsnest-Bow River .....	437	
Clearwater .....	13	
Brazeau-Athabaska .....		
By the staff of the Forest Reserves .....	473	
Edmonton .....	32	
Edson .....	19	
Athabaska .....	162	
Bonnyville .....		
McMurray .....	26	
Slave Lake .....	107	
Grande Prairie .....	196	
Peace River .....	122	
By the staff of the Northern Alberta Forest District .....	664	
Sub-total .....	1,137	
By Outside Agencies:		1,137
Honorary Fire Guardians:		
Edmonton .....	64	
Edson .....	124	
Athabaska .....	51	
Bonnyville .....	33	
McMurray .....	1	
Slave Lake .....	73	
Grande Prairie .....	137	
Peace River .....	148	
Other areas .....	61	
Fire Guardians in Municipal Districts .....	692	
Royal Canadian Mounted Police .....	601	
Sub-total .....	2,084	2,084
TOTAL .....		3,221

## PROSECUTIONS AND CONVICTIONS, PRAIRIE FIRES ACT, 1937

	Instituted by Forest Service	Instituted by other Agencies	Totals
Number of prosecutions .....	17	20	37
Number of convictions .....	14	19	33

*Fire Detection.*—In common with a desired improvement in fire prevention, the necessity for similar steps relating to detection has been regularly emphasized. The situation is so apparent and has been discussed so often that there is no need for repetition other than to report that at the end of the year under review no further improvement had been effected. Here again the use of additional funds would be involved but the resulting improvement would amply justify the additional outlay.

*Fire Suppression.*—The season of 1937 unfortunately vindicated the remarks contained in the Report covering 1936. In northern Alberta fires originate almost entirely as a result of some form of human activity. The population has greatly increased in this region during the last fifteen or twenty years and, therefore, there has been a steady increase or intensification of fire danger from this source. In the face of this the field staff has not been augmented to meet this danger but rather has been decreased to the extent that some important areas receive no coverage at all. The organization in strength, equipment and facilities is elementary and cannot be expected to cope with present day conditions.

Individually, the members of the field force turned in splendid work in spite of the various handicaps that faced them in the north. Fire-fighting, however, seeks to remove the effect and is almost always an emergency operation lacking

the ordinary conveniences of camp life, due often to the lack of ordinary equipment. Fire-suppression will not reach a very high level until pre-organization is possible and basically this depends on the employment of an efficient field force in sufficient strength and at the most advantageous period of the year and, in addition, the provision of equipment and facilities ahead of actual necessity.

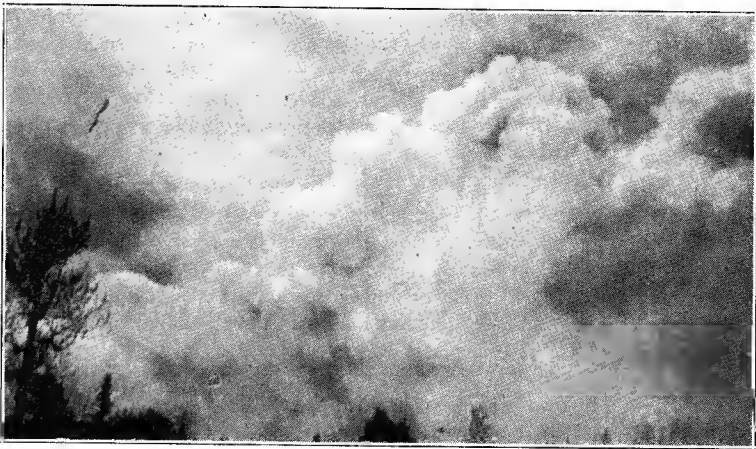
Large destructive fires occurred over the north-eastern, north-western and central-western parts of the province, also north and north-east of Wabasca. These occurrences were in regions normally safe from large summer fires but this season the muskegs were comparatively dry and did not provide a barrier to advancing fire. Streams were low and many creeks went dry, not only handicapping crews on the fire line but in some instances creating difficulty in respect to camp location and supply.

It will be noted 375 fires were dealt with, 209 being in the large or C and D classes, and the remainder being under ten acres in extent.

The total loss is estimated at \$1,088,465.95 and suppression costs, including ranger service actually expended on fires, \$55,339.66.

While very hazardous conditions prevailed over the Cypress Hills and Rocky Mountain Forest reserves, it is notable that fire occurrence and loss were held to a minimum through the vigilance of the officers concerned. It should be remarked here that the regular campers who return to these regions year after year appreciate the wonderful opportunities found therein for recreation and realize fully that if their favorite camping districts are to remain attractive that great care must be exercised in the use of all forms of fire.

*Causes.*—The classification of fires by causes provides information as to group origin. It should be noted that the following causes are responsible for the largest number of fires and the greatest destruction, in the order given:—campers, settlers, incendiary. These three causes, together with fires of unknown origin, account for over 75% of the number of fires and over that portion of the total of the burnt over area. Some of the largest and most destructive fires became such owing to settlement clearing fires running out of control, following which some settlers in good faith set back fires to protect their property whilst others set out so called back fires for which there was absolutely no justification, the original fire joining up with these back fires, and all burning out of control which could only result in a large loss of public and private property.



Heavy smoke clouds from a forest fire in the vicinity of Antross. Cause—settlers' fires running out of control plus so-called protective back-fires not controlled

## COMPARISON OF FIRE LOSSES BY PERCENTAGE

Causes	1931	1932	1933	1934	1935	1936	1937
Campers .....	23.7	52.8	38.9	35.4	42.3	38.3	35.9
Smokers .....	3.2	5.3	13.5	11.7	9.3	9.7	4.5
Settlers .....	21.9	17.1	17.4	17.9	8.2	11.7	20.7
Railways .....	6.6	4.5	2.8	5.0	10.3	4.0	9.3
Lightning .....	.6	2.6	5.2	7.5	1.0	14.1	2.2
Industrial operations .....	1.9	1.1	1.7	4.2	1.0	3.2	.8
Incendiary .....	15.1	8.2	11.8	11.2	22.7	10.1	13.5
Public works .....	1.4	.5	1.4	1.3	1.0	.4	.3
Unclassified .....	1.5	1.6	..	2.5	2.1	2.0	7.2
Unknown .....	24.1	6.3	7.3	3.3	2.1	6.5	5.6

## RAILWAY FIRE LOSSES, CALENDAR YEAR 1937

This statement deals only with fires burning on forested areas under the supervision of the Alberta Forest Service, and which started within 300 feet of the centre line of the railway right of way.

## Causes and numbers of fires:

Railway causes—Locomotives .....	10	
Employees .....	6	
Sub-total .....	16	
Other causes—Campers and travellers .....	8	16
Settlers .....	4	
Unknown .....	2	
Sub-total .....	14	
TOTAL .....		30

## Number of acres burned:

Slashing or old burn .....	..
Timber land .....	135
Young growth .....	167
Not forested .....	268.32
TOTAL .....	570.32

## Loss:

Timber .....	\$415.00
Young growth .....	435.00
Forest products .....	..
Other property .....	..
TOTAL .....	\$850.00

ANNUAL STATEMENT OF FIRES BY CAUSES, MONTHLY DISTRIBUTION, ETC., WITHIN AND OUTSIDE FOREST RESERVES, ALBERTA—CALENDAR YEAR, 1937

Cause	Number					P.C.	Damage	Area, Acres	Monthly Distribution												Prosecutions	Fires Inside Provincial Forests		Fires Outside Provincial Forests		
	Tot.								January	February	March	April	May	June	July	August	September	October	November	December		Convictions	No.	Area Acres	No.	Area Acres
	A	B	C	D	Tot.																					
Camp-fires .....	44	27	38	26	135	35.9	\$ 357,632.99	266,052 3/4	...	...	...	9	15	30	40	19	16	6	...	...	...	...	6	90	129	265,962 3/4
Smokers .....	7	9	...	1	17	4.5	262.50	253 1/2	...	...	...	...	7	6	4	...	...	...	...	...	...	...	5	1	12	252 1/2
Settlers .....	14	8	35	21	78	20.7	117,578.75	44,709 1/2	...	...	...	...	34	24	6	6	8	...	...	...	...	...	...	...	78	44,709 1/2
Railways .....	9	19	5	1	34	9.3	3,125.00	2,462	...	...	...	4	5	7	3	6	6	3	...	...	...	...	1	...	33	2,462
Lightning .....	4	3	1	...	8	2.2	421.93	216	...	...	...	...	...	1	6	1	...	...	...	...	...	4	...	4	...	216
Industrial .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Operations .....	2	...	...	1	3	.8	510.00	1,300	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	3	1,300
Incendiary .....	4	5	25	17	51	13.5	317,648.78	265,087	...	...	...	2	17	17	11	...	4	...	...	...	...	...	...	...	51	265,087
Public Works .....	...	...	...	1	1	...	206.75	118	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	118
Unclassified .....	3	5	8	11	27	7.2	222,411.00	196,194	...	...	...	1	8	9	7	1	...	...	...	...	...	...	1	...	26	196,194
Unknown .....	2	1	9	9	21	5.6	68,668.25	58,866 1/2	...	...	...	...	6	2	4	6	3	...	...	...	...	...	...	...	21	58,866 1/2
TOTALS .....	89	77	122	87	375	100.00	\$1,088,465.95	835,259	...	...	...	17	94	96	82	39	38	9	...	...	...	...	17	91	358	835,168
Per cent. ....	23.7	21	32.2	23.1	100	...	...	...	...	...	...	4.5	25	25.8	21.8	10.4	10.1	2.4	...	...	...	...	4.5	...	...	95.5

ANNUAL SUMMARY OF FOREST FIRE LOSSES, ALBERTA—CALENDAR YEAR 1937

FIRE CAUSES	NUMBER OF FIRES					LANDS AFFECTED							LOSS										SUPPRESSION COSTS			Burning Permits Issued	
						Ownership		AREA	CONDITION				TIMBER (MERCHANTABLE AND CUT-OVER)					Loss of Timber	Loss of Young Growth	Loss of Other Property	Total Loss	Ranger Service	Other Expenditures	Total			
	Public, Acres	Private, Acres	Merchantable Timber, Acres	Cut-over Timber, Acres	Young Growth, Acres	Not Forested, Acres	SALVABLE			UNSAVABLE																	
							Saw-timber, M.ft.B.M.	Other, Cords	Depreciation	Saw-timber, M.ft.B.M.	Other, Cords	Loss															
A	B	C	D	Total	Public, Acres	Private, Acres	Total, Acres	Merchantable Timber, Acres	Cut-over Timber, Acres	Young Growth, Acres	Not Forested, Acres	Saw-timber, M.ft.B.M.	Other, Cords	Depreciation	Saw-timber, M.ft.B.M.	Other, Cords	Loss	Loss of Timber	Loss of Young Growth	Loss of Other Property	Total Loss	Ranger Service	Other Expenditures	Total			
FIRES WITHIN FOREST RESERVES																											
Campers	3	2	1	.....	6	90	.....	90	5	.....	44	41	.....	.....	.....	37,500	.....	\$ 75.00	\$ 75.00	\$ 210.00	.....	\$ 285.00	\$ 96.20	\$ 210.41	\$ 306.61	.....	
Smokers	4	1	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.50	.....	2.50	9.26	1.00	10.26	.....	
Settlers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Railways	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.51	1.89	3.40	.....	
Lightning	3	1	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8½	4.25	4.25	.30	.....	4.55	22.55	17.88	40.43	.....	
Industrial Operations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Incendiary	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Unclassified	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21.67	5.01	26.68	.....	
Unknown	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
TOTALS	12	4	1	.....	17	90	.....	90	5	.....	44	41	.....	.....	.....	37,500	8½	\$ 79.25	\$ 79.25	\$ 212.80	.....	\$ 292.05	\$ 151.19	\$ 236.19	\$ 387.38	.....	
FIRES OUTSIDE FOREST RESERVES																											
Campers	41	25	37	26	129	261,231¼	4,731	265,962¼	53,076½	1,314	164,223½	47,348¾	882	4,270	\$2,245.50	57,812	251,903	\$171,561.79	\$173,807.29	\$182,650.20	\$ 890.50	\$ 357,347.99	\$ 1,191.32	\$15,146.34	\$16,337.66	.....	
Smokers	3	8	.....	1	12	253½	.....	253½	25	2½	17	209	.....	376	235.00	.....	.....	235.00	25.00	.....	.....	260.00	83.05	177.02	260.07	.....	
Settlers	14	8	35	21	78	30,074¾	14,634½	44,709¼	9,507	5,395	17,463	12,344¼	6,524	2,055	2,742.10	2,554	125,587	78,581.20	81,323.30	34,114.95	2,140.50	117,578.75	460.03	6,835.85	7,295.88	.....	
Railways	8	19	5	1	33	2,298¾	163¼	2,462	150	5	2,042	265	.....	.....	.....	.....	770	465.00	465.00	2,660.00	.....	3,125.00	11.41	197.41	208.82	.....	
Lightning	1	2	1	.....	4	216	.....	216	200	.....	16	.....	.....	.....	.....	.....	1,600	400.00	400.00	17.38	.....	417.38	27.15	154.80	181.95	.....	
Industrial Operations	2	.....	.....	1	3	1,220	80	1,300	340	100	860	.....	.....	.....	.....	.....	1,020	510.00	510.00	.....	.....	510.00	16.66	130.25	146.91	.....	
Incendiary	4	5	25	17	51	238,548	26,539	265,087	43,593	3,055	187,225	31,214	250	24,612	3,082.00	149,322	74,920	279,849.91	282,931.91	34,669.87	47.00	317,648.78	996.38	14,475.71	15,472.09	.....	
Unclassified	2	5	8	11	26	196,094	100	196,194	78,233	6,987	78,229	32,745	6,636	1,800	460.00	39,061	104,011	17,374.00	17,834.00	204,417.00	160.00	222,411.00	362.29	11,781.17	12,143.46	.....	
Unknown	2	1	9	9	21	51,614½	7,252	58,866½	7,628	8,760	11,576	30,902½	410	.....	645.00	2,795	49,580	21,428.75	22,073.75	46,569.50	25.00	68,668.25	203.78	2,612.03	2,815.81	.....	
Public Works	.....	.....	1	.....	1	70	48	118	81	.....	37	.....	.....	.....	.....	.....	446	133.00	133.00	73.75	.....	206.75	.....	89.63	89.63	.....	
TOTALS	77	73	121	87	358	781,621¼	53,547¾	835,169	192,833½	25,618½	461,688½	155,028½	14,702	33,113	\$9,409.60	251,544	609,837	\$570,303.65	\$579,713.25	\$505,197.65	\$3,263.00	\$1,088,173.90	\$3,352.07	\$51,600.21	\$54,952.28	.....	
FIRES WITHIN AND WITHOUT FOREST RESERVES																											
Campers	44	27	38	26	135	261,321¼	4,731	266,052¼	53,081½	1,314	164,267½	47,389¾	882	4,270	\$2,245.50	95,312	251,903	\$171,636.79	\$173,882.29	\$182,860.20	\$ 890.50	\$ 357,632.99	\$ 1,287.52	\$15,356.75	\$16,644.27	.....	
Smokers	7	9	.....	1	17	253½	.....	253½	25	2½	17	209	.....	376	235.00	.....	.....	235.00	27.50	.....	.....	262.50	92.31	178.02	270.33	.....	
Settlers	14	8	35	21	78	30,074¾	14,634½	44,709¼	9,507	5,395	17,463	12,344¼	6,524	2,055	2,742.10	2,554	125,587	78,581.20	81,323.30	34,114.95	2,140.50	117,578.75	460.03	6,835.85	7,295.88	.....	
Railways	9	19	5	1	34	2,298¾	163¼	2,462	150	5	2,042	265	.....	.....	.....	.....	770	465.00	465.00	2,660.00	.....	3,125.00	12.92	199.30	212.22	.....	
Lightning	4	3	1	.....	8	216	.....	216	200	.....	16	.....	.....	.....	.....	.....	1,608½	404.25	404.25	17.68	.....	421.93	49.70	172.68	222.38	.....	
Industrial Operations	2	.....	.....	1	3	1,220	80	1,300	340	100	860	.....	.....	.....	.....	.....	1,020	510.00	510.00	.....	.....	510.00	16.66	130.25	146.91	.....	
Incendiary	4	5	25	17	51	238,548	26,539	265,087	43,593	3,055	187,225	31,214	250	24,612	3,082.00	149,322	74,920	279,849.91	282,931.91	34,669.87	47.00	317,648.78	996.38	14,475.71	15,472.09	.....	
Unclassified	3	5	8	11	27	196,094	100	196,194	78,233	6,987	78,229	32,745	6,636	1,800	460.00	39,061	104,011	17,374.00	17,834.00	204,417.00	160.00	222,411.00	383.96	11,786.18	12,170.14	.....	
Unknown	2	1	9	9	21	51,614½	7,252	58,866½	7,628	8,760	11,576	30,902½	410	.....	645.00	2,795	49,580	21,428.75	22,073.75	46,569.50	25.00	68,668.25	203.78	2,612.03	2,815.81	.....	
Public Works	.....	.....	1	.....	1	70	48	118	81	.....	37	.....	.....	.....	.....	.....	446	133.00	133.00	73.75	.....	206.75	.....	89.63	89.63	.....	
TOTALS	89	77	122	87	375	781,711¼	53,547¾	835,259	192,838½	25,618½	461,732½	155,069½	14,702	33,113	\$9,409.60	289,044	609,845½	\$570,382.90	\$579,792.50	\$505,410.45	\$3,263.00	\$1,088,465.95	\$ 3,503.26	\$51,836.40	\$55,339.66	.....	
SUMMARY BY DIVISIONS																											
N.A.F.D.*	75	70	118	85	348	778,321¼	53,272¾	831,594	192,743½	24,250½	461,142¼	153,457¼	14,702	17,081	\$9,409.60	250,644	609,837	\$570,303.65	\$566,339.25	\$503,662.65	\$3,113.00	\$1,073,114.90	\$ 3,131.93	\$50,015.23	\$53,147.16	.....	
Clearwater	.....	1	1	2	4	2,995	.....	2,995	90	1,368	469	1,068	.....	16,032	.....	900	.....	13,374.00	1,533.75	.....	.....	14,907.75	127.46	1,480.92	1,608.38	.....	
Crownsnest-Bow River	5	5	1	.....	11	2	275	277	.....	.....	76¼	200¼	.....	.....	.....	.....	.....	8½	4.25	4.25	4.05	150.00	158.30	62.45	54.25	116.70	.....
Brazeau-Athabaska	9	1	2	.....	12	393	.....	393	5	.....	44	344	.....	.....	.....	37,500	.....	75.00	75.00	210.00	.....	285.00	181.42	286.00	467.42	.....	
Cypress Hills	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TOTALS	89	77	122	87	375	781,711¼	53,547¾	835,259	192,838½	25,618½	461,732½	155,069½	14,702	33,113	\$9,409.60	289,044	609,845½	\$570,382.90	\$579,792.50	\$505,410.45	\$3,263.00	\$1,088,465.95	\$ 3,503.26	\$51,836.40	\$55,339.66	.....	

\*N.A.F.D.—Northern Alberta Forest District.



*Personnel.*—In considering the benefits to be derived from the employment of seasonal staff, it is necessary to consider not only the number employed but the relation of the period of employment to the work to be performed.

The employment of field staff by the Forest Service finds its reason in forest protection and administration. Practically all field activities complement these two major divisions of work. Protection, to be of value, must concentrate on fire prevention and the early control of such fires as occur. In addition, there is the necessity of maintaining lines of communication and other improvement projects which are vital to protection and administrative work. This preparation takes place annually and, since 1932, has centred on the spring, summer and fall seasons due to the fact that the field staff has since that year been almost entirely seasonally employed. If the present staff set up is to remain unchanged with respect to the ratio of permanent to seasonal employees, then the commencement and the period of employment should be arranged so as to secure the maximum benefits from seasonal employees.

There is nothing to add to remarks made in former reports relative to staff strength. Field coverage is absolutely inadequate.

*Fire-fighting Equipment.*—The equipment situation remains unchanged from that indicated in former reports. With each large fire emergency arises the necessity of emergency equipment purchases. While these are not entirely inescapable, it is a fact that preparatory purchases could be made that would not only eliminate the necessity of such emergency purchases to a great extent but would in the case of hand tools and kitchen equipment result in the purchase of a supply of standardized material on a competitive basis. Distribution would then be possible prior to the actual necessity for the equipment arising.

#### FOREST ADMINISTRATION

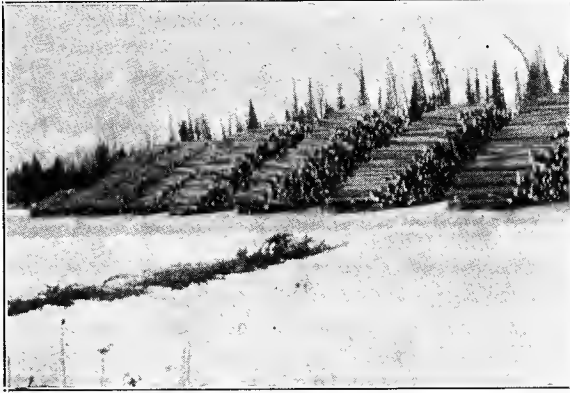
*Provincial Forest Reserves.*—This section of the report deals with timber disposal from the forest reserves. Compared with the immediately preceding year, the statement with respect to this item shows a considerable reduction. General economic conditions are the major influence affecting the timber industry and it is probable that a series of medium or good crop years would be accompanied by a sizeable increase in the demand for forest products.

#### TIMBER CUT UNDER PERMIT, ALBERTA FOREST RESERVES—FISCAL YEAR 1937-38

	Cooking Lake	Cypress Hills	Crownest- Bow River	Clearwater	Birch- Athabaska	Totals
Number of Permits .....	38	207	273	27	46	591
Fuelwood, dry (cords) .....	143	622	3,599	68	200	4,632
Fuelwood, green (cords) .....			53			53
Mine timber, dry (lineal feet) .....			431,956	82,000	72,174	586,130
Mine timber, green (lineal feet) .....				38,833	2,040	40,873
Mine timber (pieces) .....					2,479	2,479
Lagging (cords) .....						
Lagging (lineal feet) .....			205,813	37,000		242,813
Fence posts .....	6,500	1,875	4,490	20	814	13,699
Sawlogs (F.B.M.) .....			98,500			98,500
Round timber (pieces) .....	500	13,188	10,058	221	1,117	25,084
Round timber (lineal feet) .....		206	22,027	12,398		34,631
Fence droppers (pieces) .....			2,410			2,410
Telephone poles (pieces) .....			1,000			1,000
Telephone poles (lineal feet) .....			600			600
Mine ties (pieces) .....			300			300
Train ties (lineal feet) .....			5,000			5,000
Railway ties, green (pieces) .....			150			150

*Provincial Lands.*—The utilization of the timber resources on all provincial lands under the administration of the Department reflected the increased demand during the year for Alberta lumber in the United States and Ontario. The total manufacture of sawn lumber from timber on provincial lands showed an

increase of approximately 40%. Unfortunately, this increased production appears not to have been justified by a maintenance of either prices or demand. Price levels at the end of the year were at a very low ebb, and generally speaking Alberta manufacturers find their yards heavily stocked with little demand in sight.



A portion of a winter cut of saw logs decked on the river bank and ready to be broken out when sufficient water comes in the spring

There were also increases in production of mine timber, lath and some other timber products, but the manufacture of railway ties, which constitutes the second most important timber product in this province, fell off by approximately 15% from the previous year's figures. Contract prices on railway ties remained unchanged from the preceding year.



Decking logs on the Freeman River in northern Alberta

The reduction of dues on lumber which was originally granted to cover material cut between October 1st, 1933 and September 30th, 1934 and later extended on two occasions, expired on September 30th, 1937. However, in view of the beneficial effect of these reductions of dues on lumber production and on employment in the industry and of the continued need of the industry for this assistance, the period has, since the end of the fiscal year now under consideration, been again extended from September 30th, 1937 to June 30th, 1939. In



addition to these reductions of dues on lumber, a reduction of 2c per tie on all No. 2 railway ties was also granted to cover the 1937-38 winter tie-making operations. This reduction has since been extended to June 30th, 1939.

There was a noticeable increase in the timber operations conducted under arrangement between this Department and the Bureau of Relief and Public Welfare. Permits under this arrangement covered the cutting of railway ties, telephone poles, bridge and culvert material and other classes of timber products. On the whole this arrangement worked satisfactorily and appears to have been of great benefit to a very considerable number of men who might otherwise have been dependent on relief.

Probably owing to the generally depressed condition of the lumber market there was little or no demand for larger tracts of timber. Regulations to govern the disposal of such larger tracts of timber have not up to the present been made effective.



Transportation looms large in the timber operators' plans. Trucks and crawler type tractors are replacing the horse on the larger operations



Crawler type tractor used on the log haul

The following table summarizes the timber business transacted at Head Office for the Edmonton District and also at the land agencies of Calgary, Lethbridge and Peace River:

(a) MANUFACTURES FROM LICENCE TIMBER BERTHS:					
Number of active operations	33	8			41
Lumber, feet, board measure	38,782,429	4,411,535			43,193,964
Railway ties	13,403	11,189			24,592
Round timber (including mine timber), lineal feet	4,232	1,476,553			1,480,785
Lath	4,440,999				4,440,999
Cordwood, cords	12	45			57
(b) MANUFACTURES FROM TIMBER PERMIT BERTHS:					
Number of active operations	214	18			232
Lumber, feet, board measure	63,372,393	2,622,113			65,994,506
Railway ties	747,731	25,778			773,509
Round timber (including mine timber), lineal feet	68,983	43,500			112,483
Lath	3,640,700				3,640,700
Shingles	431,000				431,000
Cordwood, cords	18,339				18,339
(c) MANUFACTURES UNDER SPECIAL TIMBER PERMITS:					
(Sec. 40 (h) of the Timber Regulations)					
Number of active operations	138	45			183
Lumber, feet, board measure	2,415,792	772,771			3,188,563
Railway ties	96,905	31,683			128,588
Round timber (including mine timber), lineal feet	34,416	24,750			59,166
Shingles	115,000				115,000
Cordwood, cords	141				141
(d) TIMBER PERMITS ISSUED AUTHORIZING THE CUTTING OF MATERIAL SHOWN HEREUNDER:					
Number of permits issued	1,549	226			2,521
Lumber, feet, board measure	16,095,661	1,106,522		722	22,970,943
Railway ties	31,539	630		4,500	36,669
Piling, lineal feet	63,475	2,460		13,699	79,634
Mining timber, lineal feet	440,893	357,876		1,000	799,769
Telegraph and telephone poles	19,868	200		1,450	21,518
Building logs, lineal feet	99,127	15,782		116,125	231,034
Fence rails	672,482	13,350		598,755	1,284,587
Fence posts	177,741	11,315		145,095	334,151
Roof poles	133,145	1,950		122,000	257,095
Shingles	474,000			92,000	566,000
Shingle bolts, cords	97	105		198	400
Fuel wood, cords	6,467	2,361		1,263	10,285
Lath	30,000			194	30,000
Guard rails	1,500			750	2,250



## GRAZING

Succeeding years of drought in southern Alberta have considerably reduced the normal carrying capacity of livestock range within the forest reserves. Authorized grazing capacities were reduced where and when it became apparent that this should be done in the interest of the industry and the range. This fact, together with a reduction in the size of herds, explains the decrease in grazing business as shown in the following statement:

## GRAZING STATEMENT—ALBERTA FOREST SERVICE, 1937-38

Forest	No. of Permits	No. of Horses	No. of Cattle	No. of Sheep
Cypress Hills .....	59	396	2,199	.....
Crowsnest-Bow River .....	260	2,010	16,345	3,174
Clearwater .....	95	456	334	.....
Brazeau-Athabaska .....	115	556	43	.....
TOTALS.....	529	3,418	18,921	3,174

## COMPARATIVE STATEMENT, GRAZING—ALBERTA FOREST SERVICE

Grazing year—	1931	1932	1933	1934	1935	1936	1937	Totals	Average
Number of permits .....	456	606	493	517	533	497	529	3,631	518
Number of cattle .....	15,041	20,086	20,230	22,557	25,097	23,407	18,921	145,339	20,762
Number of horses .....	3,417	3,377	3,185	2,541	2,207	2,441	3,418	20,586	2,940
Number of sheep .....	4,379	7,465	6,705	3,078	4,114	5,443	3,174	34,358	4,908

The granting of the privilege to utilize range forage by way of a lease or a permit does not in itself guarantee satisfactory results either to the industry or to the owners of the grazing resource. Grass or range forage replaces itself naturally, providing the complete destruction of the plants by overgrazing is avoided and also providing reseeding is permitted. The first requires that the carrying capacity for grazing purposes be carefully reviewed and a capacity set that, if fully utilized, will not result in any material reduction of plant density. The second requires a rotation of use.

Grazing capacities, period of use, manner of utilization and other related matters are all within the scope of existing management of range within the forest reserves. The grazing regulations allow adaptation to changing conditions, always with a view to protecting and ensuring the continuance of a valuable resource.

## IMPROVEMENTS

The work of re-establishing the headquarters for the Lesser Slave and McMurray divisions of the Northern Alberta Forest District was largely completed during the year. In both cases the local staff performed the majority of this work and it is to the credit of the individuals concerned that these headquarters are now in better condition than they have been for some years. Each headquarters group is a creditable addition to the community in which it is situated. Generally speaking, the improvement work of the year was that required for the maintenance of existing projects. Fortunately the forest reserve staffs were not engaged on fire-fighting to a great extent and thus were available for important maintenance work.

NEW CONSTRUCTION PROJECTS:										IMPROVEMENT STATEMENT									
Forest		Houses	Garages, Sheds, etc.	Fences	Fields (breaking in acres)	Water Supply Systems	Barns and Stables	Telephones (miles)	Corrals	Bridges	Look-out Towers	Roads	Trails (Miles)	Cabins	Fireguard Roads (Miles)	Tourist Stoves			
Cypress Hills	1	1	2	...	...	...	1	...	...	...	...	1	4	...	1650 ft.	1			
Crownest	4	1	1	...	...	...	...	...	...	...	...	2	16½	1	...	...			
Bow River	2	...	...	...	...	...	...	38	1	...	...	...	...	...	...	...			
Clearwater	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...			
Brazeau	...	1	...	...	...	...	...	...	...	...	...	...	7	...	...	...			
Athabaska	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...			
TOTALS		8	5	1	...	1	1	38	1	...	...	3	27½	2	1650 ft.	1			

MAINTENANCE PROJECTS:															
Forest															
	Houses	Cabins	Barns and Stables	Telephones (Miles)	Trails (Miles)	Roads (Miles)	Fences	Corrals	Water Supply Systems	Sheds, etc.	Look-out Towers and Cabins	Grounds	Hay Meadows & Pastures	Ferries	Miscel- laneous
Cypress Hills	2	1	...	...	...	...	1	...	2	1	...	1	...	...	...
Crownest	9	4	7	11	22	15	17	3	1	5	...	8	...	...	6
Bow River	4	13	6	12	62	9	21	5	6	...	...	14	2	...	3
Clearwater	5	14	3	8	31	1	...	...	1	...	...	...	...	...	...
Brazeau	7	5	2	9	13	...	7	...	1	...	...	4	...	...	...
Athabaska	2	8	1	5	26	3	11	...	1	...	...	1	...	...	...
TOTALS	29	45	19	45	154	28	57	8	11	12	...	28	5	...	9

## IMPROVEMENTS—STATEMENT OF MAN-DAYS WORKED

## NEW CONSTRUCTION PROJECTS:

Forest	Houses	Garages, Sheds, etc.	Fences	Fields (breaking)	Water Supplies	Telephones	Corrals	Barns and Stables	Bridges	Look-out Towers	Roads	Trails	Cabins	Fireguard Roads	Tourist Stoves
Cypress Hills	92½	24	...	...	...	...	...	62	...	...	1	3	48	14½	17½
Crownest	175½	46½	...	...	...	...	...	...	...	...	...	11	6	145	...
Bow River	39	25	...	...	...	...	7	...	...	...	...	...	...	...	...
Clearwater	...	...	...	...	40	24	...	...	...	...	...	6	...	...	...
Brazeau	...	23	1	84½	...	...	...	...	...	...	...	14	...	...	...
Athabaska	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	307	120½	1	84½	40	24	7	62	...	...	1	34	54	159½	17½

## MAINTENANCE PROJECTS:

Forest	Houses	Cabins	Barns and Stables	Telephones	Trails	Roads	Fences	Corrals	Water Supplies	Garages, Sheds, Etc.	Look-out Towers and Cabins	Grounds	Hay Meadows & Pastures	Fertiles	Miscel- laneous
Cypress Hills	3	1	...	28	221	95½	2½	...	7½	1	...	9½	10½	...	88
Crownest	29	40	18	146	221	165	206½	9½	26½	6	...	47½	14½	...	4
Bow River	47	110	19	406	456	1	85	7	2	9	...	51½	17	56	9
Clearwater	4	82	19	145	363	1	42	...	3	...	...	33	...	...	...
Brazeau	29	7	3	192½	351	49	65	...	16	...	...	2	...	...	...
Athabaska	1	45½	1	79	283	...	...	...	...	...	...	...	...	...	...
TOTALS	113	285½	60	996½	1,674	310½	401	20½	55	16	...	143½	42	56	101

## PUBLICITY

It has been repeatedly emphasized in previous reports that forest protection is largely a matter of public responsibility. By this it is meant that fire occurrence is almost entirely a matter for which the residents of the province are responsible and that a recognition of this together with a realization of the benefit of forest cover would most probably be followed by a changed attitude towards the use of fire.

An effective way to bring this about offers itself through the medium of schools, the radio and the press. A continuous campaign throughout the fire season and sustained through each season would undoubtedly produce beneficial results. Such a campaign would require careful preparation and direction which is not now possible due to staff shortage. Publicity favoring forest protection is limited at present to a few brief messages in the spring followed by the usual press reports of actual fires.

## NURSERY AND TREE DISTRIBUTION

*Nursery.*—The transplanting of seedlings has been carried out as in previous years at Oliver and at the subsidiary nurseries at Fort Saskatchewan and Lethbridge.

It is regretted, however, that the same high degree of success, experienced in past years, was not obtained during the period under review owing to the fact that June rains did not occur as usual. The seedlings were planted with great care but, due to the lack of rain at a very vital time when the seedlings were



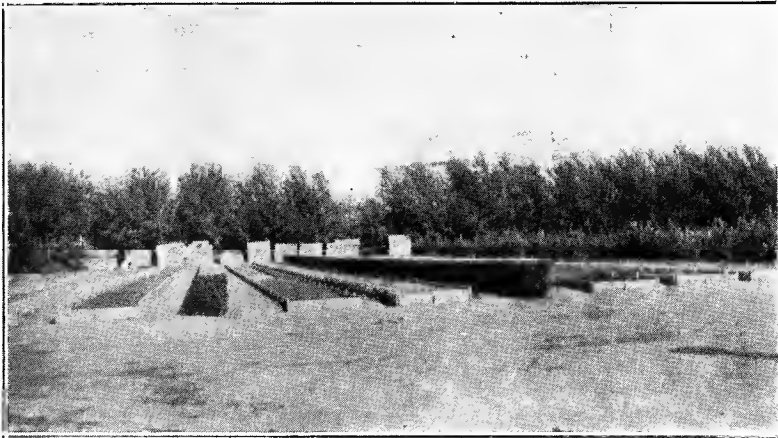
Crab-apples at Oliver Nurseries demonstrated by A. Paton, head-gardener

establishing a root system, the rate of mortality has been considerably higher than in previous years. This does not apply to Lethbridge where, with water available for irrigation purposes, the same success obtainable in the past, or even better, resulted. This is attributable to a great deal of experience now acquired in the handling of nursery stock under the irrigation system.

It would appear from such experience that an overhead sprinkling system should be installed at Oliver when moneys are available to avoid the loss brought about by the lack of natural moisture. The present system can be continued at Fort Saskatchewan where transplanting has not been as extensive as at Oliver and where labour is more readily available and of a better class, at least until such time as the nursery work is on a much larger scale than at present.

STATEMENT OF SEEDING DONE AT THE OLIVER NURSERY IN THE FALL  
OF 1937 AND THE SPRING OF 1938

200	lineal feet	Red oak ( <i>Quercus rubra</i> )
200	" "	Bur oak ( <i>Quercus macrocarpa</i> )
310	" "	Green ash ( <i>Fraxinus pennsylvanica</i> )
200	" "	Cotoneaster ( <i>Acutifolia</i> )
86	" "	Blue spruce ( <i>Picea pungens</i> )
200	" "	White spruce ( <i>Picea glauca</i> )
152	" "	Lodgepole pine ( <i>Pinus murrayana</i> )
190	" "	Douglas fir ( <i>Pseudotsuga mucronata</i> )
24	" "	Red pine ( <i>Pinus resinosa</i> )
50	" "	Siberian larch ( <i>Larix sibirica</i> )
120	" "	Elm ( <i>Ulmus</i> )
4	ounces	Catalpa ( <i>Catalpa bignonioides</i> )
4	" "	Crabapple ( <i>Malus baccata</i> )
4	" "	Honey locust ( <i>Gleditsia triacanthos</i> )
4	" "	Silver maple ( <i>Acer saccharinum</i> )
4	" "	Flowering almond ( <i>Prunus triloba</i> )
4	" "	Horsechestnut ( <i>Hippocastanum</i> )
4	" "	Juniper ( <i>Juniperus communis</i> )
4	" "	Cedar ( <i>Thuja occidentalis</i> )
4	" "	Osage orange ( <i>Maclura pomifera</i> )
3	" "	White cedar ( <i>Ball aborvitae</i> )
2	" "	Butternut ( <i>Juglans cinerea</i> )
2	" "	Black locust ( <i>Gleditsia</i> )



Seed-beds containing red pine, Scotch pine, lodgepole pine, white spruce, cedar, Douglas fir, yellow pine, Siberian larch and European larch—Oliver Nurseries



*Tree Distribution.*—The following species and quantities were given out from Oliver in 1938:

<i>Transplants:</i>	
Lodgepole pine ( <i>Pinus murrayana</i> ) .....	23,197
White spruce ( <i>Picea glauca</i> ) .....	19,413
Green ash ( <i>Fraxinus pennsylvanica</i> ) .....	12,822
Bur oak ( <i>Quercus macrocarpa</i> ) .....	11,044
Nordman fir ( <i>Abies nordmanniana</i> ) .....	5,796
Elm ( <i>Ulmus</i> ) .....	5,297
Scotch pine ( <i>Pinus sylvestris</i> ) .....	3,295
Red oak ( <i>Quercus rubra</i> ) .....	1,572
	<hr/> 82,436
<i>Cuttings:</i>	
Golden willow ( <i>Salix vitellina</i> ) .....	4,860
Laurel-leaf willow ( <i>Salix pentandra</i> ) .....	8,760
Russian poplar ( <i>Populus balsamifera</i> ) .....	21,750
	<hr/> 35,370
<i>Ornamental and exotic species:</i>	
Mountain ash ( <i>Pyrus americana</i> ) .....	214
Blue spruce ( <i>Picea pungens</i> ) .....	186
Honeysuckle ( <i>Lonicera ciliosa</i> ) .....	104
Lilacs ( <i>Syringa japonica</i> ) .....	82
Spireas .....	51
Native hawthorn ( <i>Crataegus</i> ) .....	50
Cotoneaster ( <i>Acutifolia</i> ) .....	20
Flowering dogwood ( <i>Cornus</i> ) .....	10
Ladoga pine ( <i>Bugnet—Pinus sylvestris</i> ) .....	10
Golden elders ( <i>Sambucus</i> ) .....	10
Red pine ( <i>Pinus resinosa</i> ) .....	10
Weeping birch .....	6
White birch ( <i>Betula papyrifera</i> ) .....	5
European mountain ash ( <i>Sorbus aucuparia</i> ) .....	5
Plum ( <i>Prunus nigra</i> ) .....	4
Mayday ( <i>Prunus</i> ) .....	3
Ginnalian maple ( <i>Acer ginnala</i> ) .....	2
Flowering almond ( <i>Prunus triloba</i> ) .....	1
	<hr/> 773
	<hr/> 118,579



Young wind-breaks ready for transplanting and for shipment to fill requirements of people applying for same—Oliver Nurseries



Cucumbers next hedge with vegetable marrows on right. The shelter-belt here consists of caragana, Siberian larch, lodgepole pine and Jack pine—Oliver Nurseries

#### YOUTH FORESTRY TRAINING PROJECT

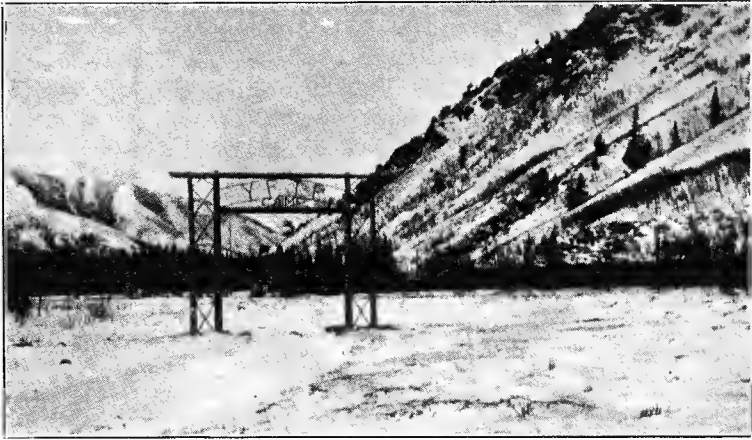
Following the signing of an agreement between the dominion and the province by which each authority undertook to meet half of the cost of a project designed to provide unemployed and needy young men between the ages of 18 and 30 with training and experience in elementary forestry, regular bush work preparations were made to set up the scheme.

The project provided for a winter camp operation and it was necessary to consider such matters as location, communication, housing, transportation and supply as well as other important incidentals.

The young men, 60 in number, were enrolled from a group of several hundred applicants and forwarded to the camp as soon as housing and food supply was arranged. Housing requirements were met by securing from the dominion government a set of sectional camp huts located at Seebe. These were dismantled, trucked to the camp site on the Highwood River within the Rocky Mountains Forest Reserve and re-erected there. Thirteen of these sectional huts were received from the Dominion Forest Service. In addition, winter storage for food supplies was provided by constructing a large root-house and a meat-house. A stable, garage for truck, car and tractor storage, and tool-house were built by the trainees, the material being largely round building timber. One large sectional hut was used for combined lecture room and recreation while another was given over to recreation.

Experience in forestry projects and regular woods work was provided by employing the trainees on projects useful to the Forest Service in the vicinity of the camp. A thorough grounding in a variety of subjects was attempted in order to fit the young men for possible employment with the Forest Service as assistant rangers, patrolmen and lookoutmen. The supervision of the camp and of work project was in the hands of a man experienced in woods and forest ranger work. The more technical instruction was dealt with by the Forest Superintendent and his assistant from Calgary. The general organization and direction of the scheme was in the hands of the Assistant Director of Forestry.

The project was in full operation early in November and continued through to beyond the end of the fiscal year, ending on May 31st. Towards its conclusion several of the trainees secured employment through their own effort



The Youth Forestry Training Camp located in the Highwood River Valley at the foot of Mt. Head and within the Rocky Mountains Forest Reserve. The main range of the Rocky Mountains in the background.

and, after its completion, several, receiving the highest rating, were employed as assistant rangers and lookoutmen by the Alberta Forest Service and a few were placed in other employment.

Throughout the life of the project no effort was spared to assist the trainees in the matter of gaining experience, technical knowledge, good health and a good physique. The greatest handicap experienced so far as instructional work was concerned occurred in connection with the technical phase. This, as mentioned, was dealt with by the regular staff from Calgary. It was not possible to do all that was planned due to the necessity of attending to routine forestry business and at the same time attending to camp requirements and instruction.

Adequate provision was made for first aid instruction and application. Regular daily setting-up exercises were compulsory excepting on days when weather conditions did not permit. Recreation in various forms was encouraged and to this end a large open air skating and hockey rink was established and boxing gloves, punching bags and wrestling mats provided. Exploratory trips afoot or on skis were encouraged and through the leadership of one of the trainees, adept in travelling on skis, a number of the trainees made good progress in learning the use of this enjoyable and useful method of winter travel.

Certain transportation and communication difficulties and work limitations are inherent in a winter operation. These were foreseen and, while they formed definite handicaps, it is not proposed to emphasize them. With regard to limitations, it would be well to mention that winter operation greatly limited the scope of the field work which might have been taken in hand to the mutual advantage of the trainee and the Forest Service. Transport and communication difficulties, while always present to a certain degree, seldom developed to an aggravating extent due to very favourable weather. Weather conditions, such as experienced last winter in the mountain region, are not a regular occurrence and, therefore, if future projects call for winter operation, it would be likely that greater difficulty would be encountered.

STATEMENT OF MAN-DAYS WORKED DURING TRAINING PERIOD, SHOWING  
NUMBER OF MAN-HOURS OF CLASS INSTRUCTION AND OF FIELD WORK

	Number of Man-days	Number of Man-hours (Class Instruction)	Number of Man-hours (Field Work)
October .....	84	.....	588
November .....	1,558	301	10,605
December .....	1,787	1,510	10,999
January .....	1,801	2,000	9,258
February .....	1,543	533	9,066
March .....	1,590	1,012	9,047
April .....	1,255	54	8,515
May .....	1,287	243	8,028
TOTAL.....	10,905	5,653	66,106

## YOUTH FORESTRY TRAINING

## Project No. 1

## Work Accomplished by Forestry Trainees

Telephone line—6 miles new pole line, poles 26 ft.—replacing old line from boundary to Sentinel thence 1 mile west to camp. Poles all peeled—Average 8 in. at the top—set in 4 to 4½ feet.

1 bridge recovered—18 ft. by 16 ft. wide—riders on top—guard rails to approach.

1 culvert on old road—15 ft. by 4 ft.—2 log high.

1 culvert—24 ft. by 6 ft.—5 log high.

1 culvert—24 ft. by 4 ft.—2 log high.

1 culvert—24 ft. by 4 ft.—2 log high.

(all coverings of 6 in. or over; all set with driftpins; guardrails repaired; rocked and ditched.)

3 campers' shelters—12 ft. by 14 ft.—8 ft. high—log construction—peeled—mortised.

5 camp sites cleared of all brush, logs, litter, dense underbrush—burned.

Clearing of extra width road right of way—4 miles from camp to Fir Creek—average width 12 ft. each side.

Timber cut for cribbing and bridges—Gunnery Grade and road; Sentinel to Boundary—2 more bridges—1 big culvert—¼ peeled.

1 latrine—24 ft. by 12 ft.—log construction—dovetail—pole with tar-paper and earth.

1 meat house—10 ft. by 16 ft.—log construction—square corners—pole with tar-paper roof.

1 oil shed—10 ft. by 12 ft.—log construction—pole—square corners—tar-paper roof.

1 tool shed—10 ft. by 10 ft.—square corners—pole—tar-paper.

1 garage—16 ft. by 28 ft.—lumber roof—tar-paper—dovetail.

1 stable—12 ft. by 16 ft.—saddle corner—pole with tar-paper.

1 boiler house—12 ft. by 14 ft. with well inside—pole and tar-paper—square corners.

1 root-house—8 ft. by 24 ft.—cut in bank—timbered—double entrance.

1 well—with lid—running water piped in from spring.

1 sump-hole for wash-house—pipe attachments from spring.

2 sump-holes, kitchen—14 ft. by 16 ft.; 16 ft. by 20 ft.—covered and hatched.

Large amount of wood hauled in for use at camp.

All buildings had to be re-tarpapered and reroofing applied.

2 recreation huts—16 ft. by 35 ft.—erected—tar-paper and roofing applied.

1 addition to storehouse—12 ft. by 16 ft.—dovetail—lumber rubberoid.

During timber operations, slash was piled and burnt.

Snow plowing and digging of drifts for 10 miles to keep road open for the entire winter.

Levelled rink 150 ft. by 80 ft.—log walls—3 logs high.

Levelled exercise ground and parade ground.

Gravelled walks between all buildings.

General—small partitions, cupboards, tables, etc., for cookhouse and storehouse.

Ventilator for kitchen.

1 archway between dining room and kitchen.

1 entrance gate to camp grounds.

Buildings all banked up with logs and earth.

General repairs of all buildings.

Installation of fire proof stove stands and galvanized iron for proper heat radiation.

Y.F.T.P. Road—Project No. 1.

Distance—1900 feet (rock: 570 feet),

Yardage—dirt and rubble... 2,742 cu. yds.

rock ..... 1,594 " "

Total..... 4,336 " "

Width—20 feet (average),

Rock retaining walls—total length, 414 feet—average height, 9.8 feet.

## GAME

While the Game Branch was transferred to the Department of Agriculture early in the fiscal year, some reference is necessary to the work of Game protection, principally for the reason that for approximately one year the field staff of the Forest Service and the Assistant Director of Forestry were intimately connected with the Game administration, with the field staff concerned with Game administration and protection under the supervision of the Assistant Director of Forestry as Game Commissioner.

Genuine regret was felt at the severance of the connection between Forestry and Game for a large amount of preparatory work had been in hand leading to improvements that would have been mutually beneficial to both branches and to the province at large. It is to be noted that improvement in Game administrative matters was effected; firstly, by the provision of a much larger vote of funds and, secondly, by employing the funds to provide a greatly improved field coverage in the interests of Game Branch administration and protection.

It is of particular interest to note that despite the dissociation of the two branches of administration that all officers of the Forest Service continue to offer assistance and active co-operation in the interest of the conservation of wild life and that, on occasion, such help, involving the time of men and use of equipment, has been forthcoming when the interests of the Forest Service, while of primary importance, were of secondary consideration. The ordinary field work of the Forest Service makes it possible to do a large amount of unreported useful work in the interest of wild life conservation but, in addition to this, there were actually 462 man-days spent on work beneficial to the Game Branch.

MILEAGE TRAVELLED BY EMPLOYEES OF THE ALBERTA FOREST SERVICE

FISCAL YEAR 1937-38

Divisions	Foot	Saddle	Driving	Speeder	Auto	Canoe	Rowboat	Motorboat	Plane	Railway	Other	Total
Northern Alberta Forest District	26,059½	39,883	9,529	24,532	119,387½	3,666	1,457	5,463	642	11,244	841	242,699
Crowsnest-Bow River Forest	2,475	30,105	2,502	1,780	41,501	.....	.....	.....	.....	1,729	304	78,616
Clearwater Forest	4,123	13,149	.....	.....	14,434	.....	.....	25	.....	233	.....	33,746
Brazeau-Athabaska Forest	2,836	17,438	.....	3,983	3,696	.....	.....	.....	.....	723	.....	28,676
Cypress Hills Forest	50	1,460	.....	.....	480	.....	.....	.....	.....	.....	.....	1,990
TOTALS	35,545½	102,035	12,031	30,295	179,493½	3,666	1,457	5,488	642	13,929	1,145	385,727

## Accounting Division

### REPORT OF THE ACCOUNTANT, I. N. McKINNON

A surplus of \$1,084,591.78 on income account was shown for the period ending March 31, 1938, an increase of \$87,872.19 over the previous year, despite the transfer to the Department of Agriculture of the Game and Fisheries Branches, the combined surplus of which for the previous year was \$56,560.45.

Revenue for the year was \$1,606,156.60, which after deducting Game and Fisheries revenue from the previous year's figure, shows an increase of \$101,967.68. Main revenue increases and decreases were as follows:

	Increase	Decrease
Grazing permits, fees, rentals, etc. ....	\$ 67,173.23	.....
Timber fees, dues, rentals, etc. ....	28,961.35	.....
Coal royalties .....	.....	\$ 16,987.22
Petroleum and Natural Gas:		
Fees, rentals, etc. ....	.....	63,447.25
Royalties .....	140,945.34	.....
School lands miscellaneous .....	.....	35,247.11
School lands sales interest .....	.....	24,488.76
Miscellaneous .....	5,058.10	.....
Net revenue increase .....	.....	101,967.68
	<u>\$242,138.02</u>	<u>\$242,138.02</u>

Particulars of revenue by branches will be found in Statement "B". Cash received from all sources amounted to \$1,789,276.20 as compared with \$1,807,855.35 for the previous year. Particulars are given in Statement "A".

Total expenditure amounted to \$521,564.72, and after making allowance in last year's figures for the cost of operation of the Game and Fisheries Branches a decrease of \$42,464.96 is shown. Decrease was accounted for by a drop in fire fighting expenses of \$67,295.61.

### INDEX TO STATEMENTS

- A.—Statement of Cash Receipts from all Sources.
- B.—Statement of Income Revenue by Branches.
- C.—Statement of Cash Receipts, School Lands Branch.
- D.—School Lands Trust Fund Balance Sheet.
- E.—Statement of Alberta School Lands Sales Revenue Account.
- F.—Statement of Collections on Tax Recovery Lands.
- G.—Statement of Homestead Entries Granted.

## STATEMENT A.

## STATEMENT OF CASH RECEIPTS FROM ALL SOURCES

From April 1, 1937 to March 31, 1938

INCOME ACCOUNT:	Gross Receipts	Refunds	Net Revenue
<i>Lands and Grazing Branch:</i>			
Cancellation fees .....	\$ 1,264.00	\$ 14.00	\$ 1,250.00
Casual .....	5,172.46	18.58	5,153.88
Cultivation fees, rentals, etc. ....	3,813.14	99.38	3,713.76
Filing authority fees .....	1,100.00	2.00	1,098.00
Fur farm fees and rentals .....	779.07	50.00	729.07
General sales interest .....	2,122.08		2,122.08
Grazing permits, fees, rentals, etc. ....	180,883.56	40,043.50	140,840.06
Hay permits, fees, dues, etc. ....	4,582.01	533.40	4,048.61
Homestead fees .....	16,000.00	60.00	15,940.00
Improvement collection fees .....	3,918.20	120.74	3,797.46
Surface rentals .....	2,822.86	103.40	2,719.46
<i>Timber Branch:</i>			
Casual .....	2,748.69		2,748.69
Timber fees, dues, rentals, etc. ....	360,139.42	2,507.93	357,631.49
<i>Mining Lands Branch:</i>			
Casual .....	6,596.11	93.50	6,502.61
Coal fees, rentals, etc. ....	115,421.91	437.22	114,984.69
Coal Mines Act sundry revenue .....	4,818.95	34.10	4,784.85
Coal royalties .....	158,231.61	4.50	158,227.11
<i>Petroleum and Natural Gas:</i>			
Fees, rentals, etc. ....	288,221.24	3,377.20	284,844.04
Royalties .....	249,266.53		249,266.53
<i>School Lands Branch:</i>			
Interest on sales .....	41,751.06		41,751.06
Miscellaneous .....	207,790.22	15,513.67	192,276.55
<i>Miscellaneous:</i>			
Casual .....	7,832.65	241.18	7,591.47
Reimbursement of salaries and expenses .....	1,014.10	255.30	758.80
Tax recovery office fees .....	304.00	5.00	299.00
Services and supplies .....	3,129.73	52.50	3,077.23
<b>TOTAL INCOME ACCOUNT.....</b>	<b>\$1,669,723.60</b>	<b>\$ 63,567.10</b>	<b>\$1,606,156.50</b>
<b>CAPITAL ACCOUNT:</b>			
Land sales principal .....	9,541.26	16.12	9,525.14
<b>TOTAL INCOME AND CAPITAL ACCOUNTS .....</b>	<b>\$1,679,264.86</b>	<b>\$ 63,583.22</b>	<b>\$1,615,681.64</b>
<b>UNAPPLIED RECEIPTS CARRIED FORWARD:</b>			
(Subject to refund)			
Improvements .....	12,925.63	5,358.07	7,567.56
Suspense .....	39,458.44		39,458.44
School lands cultivation crop shares .....	2,890.90		2,890.90
Land patents cultivation crop shares .....	257.75		257.75
Grazing permits, fees, rentals, etc. ....	5,661.53		5,661.53
Services and supplies .....	375.00		375.00
	<b>\$1,740,834.11</b>	<b>\$ 68,941.29</b>	<b>\$1,671,892.82</b>
<b>TRUST ACCOUNT:</b>			
School lands trust fund .....	48,442.09		
<b>TOTAL CASH RECEIPTS .....</b>	<b>\$1,789,276.20</b>		

## STATEMENT B.

## STATEMENT OF INCOME REVENUE BY BRANCHES FOR FISCAL YEARS ENDING

March 31, 1937 and March 31, 1938

	Fiscal year ending March 31, 1937	Fiscal year ending March 31, 1938
Lands and Grazing Branch .....	\$ 111,610.39	\$ 181,412.38
Timber Branch .....	331,036.53	360,380.18
Mining Lands Branch .....	757,247.46	818,609.83
Fisheries Branch .....	24,317.93	
Game Branch .....	117,989.34	
School Lands Branch .....	293,763.48	234,027.61
Miscellaneous .....	10,530.96	11,726.50
	<b>\$1,646,496.09</b>	<b>\$1,606,156.50</b>



## STATEMENT C.

SCHOOL LANDS BRANCH  
STATEMENT OF CASH RECEIPTS  
April 1, 1937 to March 31, 1938

	Receipts	Refunds	Net Revenue
<b>INCOME ACCOUNT:</b>			
Sales: interest .....	\$ 41,751.06		\$ 41,751.06
Cultivation fees, rentals, etc. ....	90,128.48	\$ 14,840.54	75,287.94
Miscellaneous leases .....	197.58	1.25	196.33
Timber permits, fees, dues, etc. ....	23,073.45	204.51	22,868.94
Grazing fees, rentals, etc. ....	15,352.89	40.38	15,312.51
Hay fees, dues, etc. ....	1,324.20	90.50	1,233.70
Coal fees, rentals, etc. ....	4,869.02	45.00	4,824.02
Coal mining royalties .....	15,159.15		15,159.15
Petroleum and natural gas: fees, rentals, etc. ...	35,581.34	226.24	35,355.10
Petroleum and natural gas royalties .....	24,257.57		24,257.57
Miscellaneous .....	737.44	65.25	672.19
	<u>\$ 252,432.18</u>	<u>\$ 15,513.67</u>	<u>\$ 236,918.51</u>
Less amount carried forward to provide for tax refunds on cultivation lease crop shares .....			2,890.90
	<u>\$ 252,432.18</u>	<u>\$ 15,513.67</u>	<u>\$ 234,027.61</u>
<b>TRUST ACCOUNT:</b>			
School lands sales principal .....	48,442.09		48,442.09
<b>TOTAL INCOME AND TRUST ACCOUNTS</b>	<u>\$ 300,874.27</u>	<u>\$ 15,513.67</u>	<u>\$ 282,469.70</u>

## STATEMENT D.

ALBERTA SCHOOL LANDS TRUST FUND  
BALANCE SHEET—MARCH 31, 1938

<b>ASSETS</b>			
Cash in bank and on hand .....		\$ 14,878.07	
Investments:			
Dominion of Canada debentures .....	\$9,984,429.39		
Accrued interest .....	7.14		
		9,984,436.53	
Accounts Receivable:			
Undue principal .....	\$1,549,702.12		
Arrears principal .....	1,578,521.29		
		3,128,223.41	
Due by Provincial Treasurer re adjustments.....		33.56	
		<u>\$13,127,571.57</u>	
<b>LIABILITIES</b>			
Alberta School Lands Trust Fund .....		\$13,127,562.53	
Suspense .....		9.04	
		<u>\$13,127,571.57</u>	

## STATEMENT E.

ALBERTA SCHOOL LANDS SALES  
REVENUE ACCOUNT  
April 1, 1937 to March 31, 1938

Arrears interest as at March 31, 1937 .....	\$1,322,225.65	
Interest charged .....	365,846.47	
Interest on reinstated accounts .....	180,942.08	
Interest revenue .....		\$ 41,751.06
Interest on cancelled sales written off .....		22,193.09
Amounts transferred from cultivation leases held on reinstated sales		23,838.75
Interest reductions granted by School Land Board .....		271,971.10
Arrears interest as at March 31, 1938 .....		1,509,260.20
	<u>\$1,869,014.20</u>	<u>\$1,869,014.20</u>

STATEMENT F.

STATEMENT OF COLLECTIONS ON TAX RECOVERY LANDS

April 1, 1937 to March 31, 1938

Grazing permits .....	\$ 3,031.49
Grazing rentals .....	3,861.72
Improvements .....	177.87
Sales principal .....	1,030.11
Sales interest .....	8.60
Mineral surface rentals .....	16.07
Miscellaneous leases .....	73.21
Cultivation rentals .....	830.59
Cultivation crop shares .....	1,476.49
Miscellaneous use permits .....	19.36
	<hr/>
Office fees .. .....	\$10,525.51
	299.00
	<hr/>
	\$10,824.51

STATEMENT G.

HOMESTEAD ENTRIES GRANTED

April 1, 1937 to March 31, 1938

	Homesteads	Second Homesteads	Soldier Grants	Total	Entries to Women
Edmonton Land Agency .....	686	63	6	755	266
Calgary Land Agency .....	8	4	...	12	3
Lethbridge Land Agency .....	1	...	...	1	...
Peace River Land Agency .....	784	44	4	832	316
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	1,479	111	10	1,600	585
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>